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Union-Management Relations in Italy: Some Observations

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AN AMERICAN OBSERVER of union-management relations in Italy encounters many phenomena which seem strange, either by comparison with the American scene, or in contrast to newspaper reports in this country of Italian events. For example: the Italian unions are very weak, contrary to many newspaper stories of widespread and crippling strikes. Collective bargaining takes place primarily at the national level, rarely at the local plant level. Bargaining is heavily flavored with political components. Italian unions rarely deal with grievances of the type which make up so large a portion of American union-management relationships.

There are many factors which need to be kept in mind in evaluating and understanding the Italian brand of labor relations. In this article these can be described only briefly with some indication of their relative importance.

General Factors

Unemployment

The overpowering aspect of the Italian economic situation is the burden of unemployment which is still being carried by that country. The generally accepted estimates ran around 2 million chronically unemployed and 2 million or more partially unemployed workers in 1955. This is out of a labor force of some 21 million, and consequently represents a percentage of unemployment

similar to that existing in the United States at the depth of the depression.

While the economic roots of the problem are complex, the basic difficulties arise from a deficiency of natural resources, inadequate industrialization, and overpopulation. Italy has 50 million inhabitants in an area the size of Illinois and Indiana, with less arable land, and very little coal and oil.

This burden of unemployment hangs over both manager and worker. The worker is afraid to take an aggressive stand in bargaining on wages because there are so many people who would be happy to take his job at a rate even lower than he is being paid, inadequate though this may be. The executive is reluctant to take vigorous action to expand plant capacity and production because he questions the existence of a market which can absorb these commodities. Thus, the fact of unemployment crops up in all considerations of the collective bargaining process.

Unemployment not only holds down wages; it also reduces union membership and dampens the enthusiasm of those workers who join. Officers are afraid to call any strikes except brief demonstrations of an hour to a day in length. The estimated lost time due to strikes in 1952 (the most recent official figure) was 0.16 percent, about one-fourth of the comparable figure for the United States.

Lack of Worker Mobility

A second factor which must be taken into consideration in the union-management relationship is the lack of mobility on the part of the workers. In Fascist times, the worker was required to have a police certificate showing his place of permanent residence, and it was impossible for him to get employment outside the province shown on this certificate. Since the war there has been some relaxation of this rule, but both Rome and Milan have continued to require certificates of residence as a condition of employment. These rules are not being obeyed literally, inasmuch as a considerable number of employers hire individuals from outside these districts, but in many cases at wages below the contract minima, requiring the worker to keep silent about the bargain (because he would certainly lose his job if it were known that he had been hired illegally). Thus, in 1956 there were large numbers of construction workers in Rome whose residence was out in the mountains, well outside the region for which the certificate of residence was valid. The conditions under which some of these workers lived were truly deplorable; for example, they often slept at the construction site rather than in regular sleeping quarters.

Lack of mobility is a function of the culture as well as of political regulations. There are even sharper regional differences in culture in Italy than we observe in the United States. Thus, there is more hostility in the North toward southern Italians than there would be in this country toward southern citizens. It must be conceded that

both the political and the cultural restrictions on labor mobility have operated to increase the bargaining power of workers in the industrial north. However, they have operated at the same time to prevent the development of effective worker organization from Rome on to the south of Italy.

There is at present a concerted drive by the government, and by some of the more progressive employers, to establish industry in the South and to build up the standard of living there. To some extent, perhaps, this southward shift has been motivated by considerations similar to those which operated in our own country, namely, a desire for lower wage rates, a more docile work force, and so on. However, the government's role has been that of providing funds, largely from the United States, for power and highway developments; and it has exercised some degree of control in protecting wage standards and working conditions so as to improve the general situation. Private employers have been compelled to improve working conditions and to raise payments to their own workers, not to the exact level of conditions on government projects, but at least close to them.

Class lines are sharply drawn in Italy, and vertical mobility is slight compared to that in the United States. Even for the worker's children, chances of upward mobility are low. Higher education is still almost completely limited to middle- and upper-class children; as of 1950, only 10 percent of the children 14-18 years of age were in school. About 2 percent of the 19-24 age group were in the university system. It is still difficult for a young man of poor fam-

ily, even if educated, to attain a high-level position in management.

These barriers to worker mobility have probably increased class consciousness and strengthened pronunion sentiments. But they have also weakened the bargaining position of the Italian workers in relation to management.

Organization of Management

The historical heritage of Italy also tends to operate against a development of a strong and effective labor movement. Italian industry is largely family-owned, and many enterprises have only a handful of workers. Even in the United States such firms resist unionization rather successfully.

Management has also strengthened its position by developing extremely effective employers' federations. The largest of these, *Confederazione Generale dell'Industria Italiana*, commonly known as *Confindustria*, has great power both economically and politically. Virtually all collective bargaining is done between the national unions and the appropriate employers' section of *Confindustria*. And the employers showed amazingly little interest in the process, leaving the staff of *Confindustria* a great deal of freedom. (It should be noted that this is not abused; the staff defends vigorously the interests of the employers.)

The power of the employers' associations derives in good part from the Fascist period. Under Mussolini, these federations actually had many governmental powers, and changes affecting employment conditions of groups of workers could only be made through their agency. Apparently the freedom

of the new Italian Republic has not generated in the minds of many employers a desire to break away and bargain outside the federation.

Nationwide Bargaining

Collective bargaining customarily occurs between a specific group of employers, such as those of the steel industry, and the unions representing the employees of that industry. As in almost all countries where this is the practice, this results in putting some very odd combinations together. For example, a manufacturer of small electric motors will find himself alongside the representatives of a big shipyard. Sometimes special sections of contracts are written to take account of the differences within these rather formless aggregates of employers and unions. However, the employers do not seem to be particularly concerned about this.

The national contracts, negotiated between the union representing workers in a specific industry and the association of employers for that industry, provide for minimum wages, vacations, paid holidays, sick leaves, and other kinds of fringe benefits. The clauses are extraordinarily detailed, the typical Italian contract being at least three times as long as its American counterpart. This apparently derives from the Fascist period, when these contracts attempted to spell out all the conditions of employment, and indeed represented the only protection the worker had against exploitative policies of the employer; and secondarily from the fact that most of the management people who show any specialization in this area are lawyers. The professional industrial

relations man is virtually nonexistent in Italy.

Since the federation of employers does such an excellent job of bargaining for its constituents, it is hardly surprising to find that the minimum wages defined by the national contracts are rather low. Almost every employer interviewed was able to show that wages in his factory were considerably higher than the contract minima. The lawyers at Confindustria explained this by indicating that the smaller, less efficient establishments are protected by setting the minimum wage fairly low. The more prosperous and successful employers regularly pay above the contract scale.

The institution of nationwide bargaining by industries is generally endorsed both by employers and by union officials. This situation arises from the European class-conscious tradition as well as from the immediate heritage of Fascism. Like most of the European labor movements (and indeed, the American unions as well), the Italian labor movement began as an expression of a socialist philosophy and a Marxist conception of class relationships. Union leaders constantly talk about the unity of the working class and the unity of the employer class. Concern with national collective bargaining is a natural consequence of such a way of perceiving the situation. This tendency was crystallized and exaggerated under Fascism by the establishment of *sindacati* for both workers and employers; the syndicate of workers had very little to do with collective bargaining, but it was an agency through which certain kinds of social security benefits and rec-

reational programs were administered.

Whether or not this historical background is crucial, the leaders of Italian unions constantly emphasize the need for all sections of the working class to advance together; they apparently fear the divisive effect of gains which benefit a limited group, such as would result if a local union won benefits from a prosperous employer. There is a very real likelihood that this union policy has resulted in hampering the progress of the workers, rather than in facilitating economic gains.

Political Bargaining

The weakness of the unions naturally bars any effective economic opposition to a powerful bloc of employers. The combination of the unemployment burden, union weakness, and nationwide bargaining inevitably leads to political action; the union leaders try to win concessions through political pressure and political deals which cannot be won through economic bargaining. There is a substantial group of deputies in the Parliament who represent unions, or the political parties closely affiliated with unions; the votes of these deputies may become the *quid pro quo* in a national bargaining session.

Many concessions are also won by legislative action; family allowances, cost-of-bread bonuses, and other items have been added to workers' paychecks in this manner. (At one time recently, the industrial workers' pay was composed of no fewer than 35 separate items. In 1955 a number of these bonuses were consolidated into basic pay; the unions are now campaigning for new bonuses, e.g., one to compensate

for rents, which are rising as wartime rent controls are being relaxed.)

Structure of Unions

The weakness of the Italian unions is highlighted, though apparently not caused, by the fission process rampant in the labor movement. There are today four national confederations of unions, each representing a definite political orientation. The largest of these, the Confederazione Generale Italiana del Lavoro (CGIL), is Communist-dominated. The second largest, Confederazione Italiana Sindacati Lavoratori (CISL), has close ties with the Christian Democrats. The Unione Italiana del Lavoro (UIL) is closely related to the right-wing socialists (the left socialists being in CGIL; their difficulties with the Communists late in 1956 may change this). CISL and UIL are democratic and anticommunist. Recently still a fourth national federation has been set up: Confederazione Italiana Sindacati Nazionali Lavoratori (CISNAL) with a distinctly neo-Fascist tinge. The relative strengths claimed by these confederations in October, 1955, were as follows:

CGIL.....	4,561,214
CISL.....	2,045,542
UIL.....	600,000
CISNAL.....	900,000

It is possible that all of these claims involve substantial exaggerations, according to competent local observers. Since the time of these reports, important evidence points to a weakening of CGIL (even prior to de-Stalinization) and a strengthening of CISL and UIL.

Each confederation includes a number of industrial unions (*sindacati di*

categoria); there are no craft unions in Italy. CGIL has 53 national unions; CISL, 31; UIL, 44; and CISNAL, 28. The structure within each confederation is fairly similar to that of the American CIO prior to the merger: that is, there is a provincial office for each category union, and also a provincial council uniting the unions of a given confederation; and in each large industrial city, there is a city office for the union and a city union council for the federation. Generally there are no factory organizations.

As noted earlier, the weakness of the unions makes political bargaining a necessity; but the political splits within the labor movement render even this approach less effective. The lack of factory level organization makes it difficult to deal with individual grievances, and the political orientation of activity leads to ignoring such grievances. The following anecdote is illustrative: While visiting a small rubber factory in the vicinity of Rome, I noticed a considerable number of what seemed to me to be fairly serious accident hazards. In talking with workers, I discovered that one of them was a representative of CGIL on the *Comisione Interna*. I commented on the accident hazards, and he agreed that they had a fairly high accident rate. When I asked him what action the union was taking with respect to this, he said, "None. We are busy organizing for the revolution."

This lack of concern with concrete economic issues at the local level and an overriding interest in national political questions is characteristic, not only of the Communist union, but also

of the free democratic unions. Because many of these leaders in the splinter unions have had their early union experience in CGIL, and indeed, often have a Marxist, though anticommunist, orientation, they show a continuing concern with a political approach to problems rather than the economic approach with which we are much more familiar.

Another reason for the failure to develop effective union action at the local plant level has been the existence of a curious Italian institution, known as the *Commissione Interna*. The Commissione Interna is not, strictly speaking, a union organization at all; on the contrary, it has many of the characteristics of a company union or an employee representation plan as these developed in the United States in the 1920's. It is elected by the workers of a given establishment without regard to union membership, but in recent years it has taken on a certain degree of union significance because the lists of candidates are generally proposed by the national union organization. Thus, when there is an election for the Commissione Interna, there will characteristically be a list of candidates proposed by CGIL, CISL, and perhaps one or two others. (It is also possible for an individual to run for election to the Commissione as an independent. I encountered a very active individual at one of the Fiat plants who had been elected as a CGIL representative, later as a CISL representative, and on another occasion as an independent. The reason for this latter was that he had been expelled from each of the other organizations.)

A considerable portion of the func-

tion of the Commissione is the grievance handling task which in the United States would fall to the local union organization. The Commissione is supposed to represent all workers without regard to political or union affiliation, but in practice, there are many complaints that certain groups of workers get preferred treatment. Thus, if there is a Communist majority on the Commissione, those who are following the party line get their grievances pressed more vigorously, whereas an anticommunist may have a hard time getting any support for a grievance.

The Commissione Interna deals directly with the plant management, but of course it has very little power; it can and does protest the existence of undesirable conditions, but has little power to act. There is a possibility of carrying a collective grievance to the provincial level of the union, in which case there is a shift from the Commissione Interna to the formal union organization. The provincial secretary of the union is characteristically the person to whom these grievances go; and he takes the matter up first with the representative of the local management, and then with the representative of the employers' association. One gets the impression that little success attends such efforts.

Since there has been so little attention paid to union organization at the plant level, it is not surprising that there are no contract provisions such as the closed shop or union shop, or even "sole bargaining rights." It is difficult to get any notion of how many people in a particular factory, or even in any industry, belong to a particular union. The unions, presumably, have data on

the actual number of annual membership cards sold, but they are not very free with such information. The one type of information which is publicly available is that on the distribution of votes for the *commissioni interne* in the various factories. Since these votes are customarily cast for slates of candidates put up by CGIL, CISL, and so on, they give an indication of relative worker support for the competing unions. In 1953, CGIL was winning as many as 80 percent of these votes, and in 1954 about 55 percent. However, by 1956 it appeared that CGIL had definitely dropped below 50 percent in these elections, with CISL at about 35 to 40 percent, the other groups making up the difference. It should be noted, however, that any worker is entitled to vote in these elections, and consequently this is a popularity contest rather than an indication of organizational strength.

The Role of the Union Member

Italian unions are highly centralized. The absence of any factory organization hinders close cooperation at the rank-and-file level, and the emphasis on national bargaining restricts development of local leadership. Most unions are organized from the top down—a split occurs among the top officials, a dissident group breaks away to form a new confederation, and new category unions are set up. Since these splits occur along political lines, the adherents of the new union are generally those already accepting the political “line” at the top.

Below the provincial level there may or may not be city-wide organizations

of the *categoria* unions. In the more heavily industrialized areas, such as Milan and Turin, there are customarily city-wide organizations for the category unions and also a city-wide federation. These organizations may have meetings once a month or once every two months. They elect representatives to the provincial executive board, which presumably gives direction to the provincial secretary. The city-wide meetings also choose delegates to the national congress in cases where this is not done by a meeting of the workers within the separate factories.

Another respect in which the membership problem is important is that of control over such actions as strike calls. Not only does the membership have very little influence on national union policy; there is also little consultation with the membership with regard to calling a strike. This is defended by union officials as a necessary matter of tactics in attempting to outwit the employer. But it seems also to indicate doubt that a strike vote would carry. The unions have no strike benefit funds; and the average Italian worker lives on such a low standard that, if he were asked to vote on a strike with the possibility of being out for more than a very short time, he would vote against it. Thus, it would be impossible to call strikes in any but the rarest and most extreme instances. Short “demonstration” strikes can be planned by a small group of leaders, announced, and executed with relatively little opposition from the rank and file because the amount of time lost is small, usually two hours to one day.

Recruitment of new members is ap-

parently very unsystematic (lacking local grievances to exploit, the leaders rely mostly on political agitation). Both CGIL and CISL officials state that new members are signed up by those already active in the organization. There is presumably some assistance from the provincial and city federations. In Milan, the largest industrial city in Italy, the CISL education director (this was one of the few areas where I found an education director for a union) said that they had started a series of meetings which were especially directed to youth from the ages of 16 to 20. These meetings were arranged at attractive areas, such as Lake Como, a short distance from Milan, and were intended primarily to combine a bit of week-end recreation with lectures about the importance of the union movement. He said that they were recruiting a substantial number of young people in this fashion. Such youngsters would be expected to sign up in the appropriate category union, according to the industry in which they succeeded in finding employment. The CISL group is appealing primarily to young people who have a good orientation toward the Church but are moderately socialistic. There is some reason to believe that this group is relatively larger than the procommunist group in Italian youth and consequently that this constitutes an indication of future strength for the CISL organization.

Leadership Training

All of the unions are developing training programs for activists, that is, members of the union who are willing to devote a certain amount of time on

a volunteer basis to spreading propaganda for the organization. Some of these courses are being designed along American lines with training in Italian labor law, the economic problems of the industry, how to run a meeting successfully, and so on. They are at least twenty and perhaps thirty years behind us in this area, but they are anxious to learn from American experience. CISL has set up a school for leaders at Florence in which they are making an attempt to develop a skilled staff of union functionaries. They are, however, generally believed to be behind the Communists in this regard. CGIL has a school at Pisa, to which promising young men are sent for a full year, whereas the students of CISL go to Florence for only three months. This appears to be partly a matter of financing; perhaps the East does much better by CGIL than the West does for CISL and UIL.

Selection for attendance at these schools is based in large part on political orientation; that is, a young man must not only be active in the union, but he must accept the correct "party line." It is also significant that when one raises the question, "What reward does a young man anticipate for becoming a union leader?" the answers emphasize political advancement.

It is generally believed that the leadership of CGIL is more alert and better trained than the leadership of the democratic unions. Partly this is due to the fact that CGIL had existed before Fascism and to some extent had as leaders such old-timers as were still alive when the Fascist regime came to an end. It is also partly due to the fact that CGIL

was reconstituted in 1945 and was the only labor organization for approximately five years. The anticommunist groups began to break away from CGIL and form their own organizations around 1950. They had to develop new provincial leaders and this has proved to be quite difficult. Another factor which is important is that the leadership of the CGIL is largely composed of devoted, self-sacrificing Communists who are willing to put in long hours and great energy on union work. The leaders of the democratic unions, by contrast, are bright young men who perceive the union as a means of achieving prestige and oftentimes a seat in Parliament; they do not have the self-sacrificing orientation which could rapidly push the democratic unions to a dominant place in the Italian economy.

Trend Toward Local Organization

There are signs that a change in organizational tactics and way of thinking may be in process. CISL adopted at its convention in 1954 a program called *Sezione Aziendale Sindacale* which would provide a parallel to our local union organization. The desirability of such a program relates to the possibility for obtaining concessions from particular companies which cannot be won in national bargaining. This policy has been put into concrete shape only at Fiat and other large industries in northern Italy. At Fiat, an agreement was concluded in the summer of 1956 for a reduction in hours with no reduction in take-home pay. This was agreed upon in negotiations of CISL and UIL with the company. The man-

agement at Fiat is apparently making some effort to give the workers the impression that CISL can win more concessions for them than the Communist union, and the effect of this joint propaganda and action program (along with several other factors) has been that CGIL has lost its majority on the Commissione Interna.

Another interesting sign of the times is that at its convention in 1955, CGIL copied CISL by endorsing the principle of local factory sections of the union; and the CGIL unions have announced plans to organize these local units. However, interviews with CGIL leaders indicated that most of them have not in fact accepted the principle of such types of organization; while they were officially going to conform to the convention policy, it seemed likely that not very much would be done to make it effective. Most of the top officials of CGIL are thoroughly indoctrinated Communists, and they are so accustomed to thinking in terms of the "unity of the working class" that the new idea is not easily assimilated.

Management Attitudes and Practices

An American observer is also impressed by attitudes and practices within management which differ markedly from those seen in the United States. Despite the general effectiveness of the employers' associations, executives in general do not trust each other and attempt to keep "top secret" many forms of information freely exchanged in this country. This can be illustrated by the difficulties encountered in an attempt to obtain data on actual practices in union-management relations. A

group of graduate students assigned to assist me attempted to interview the top officials of 30 firms in the Rome area with respect to these problems. Despite repeated efforts, it proved possible to obtain interviews with only 14 of the 30 executives. The others offered a variety of excuses such as: "Our headquarters are in Milan and we cannot discuss these questions," or "This is a problem for the employers' association, and I cannot express an opinion about it." Such evasive attitudes are characteristic of the Italian culture in a number of different respects. There is a marked secretiveness and an unwillingness to talk frankly about many problems. In respect to the management-labor relationship, one form of this is a great willingness to discuss the legal aspects of labor-management relations, but an evasive attitude with regard to empirical, factual situations. Coupled with this is a generally secretive attitude with regard to business conditions. It is amusing, for example, to observe that IPSOA, an institute for executive training in Turin, uses the Harvard case study method, and also uses the Harvard case studies. The explanation for this is that Italian management has been unwilling to provide the instructional staff with case study materials from their own experience.

Probably coupled with this, in a psychological sense, is the general orientation toward security which has been commented upon by many observers of European capitalism. A great many European industrialists are more concerned with a guaranteed annual income and a secure share of a small market than they are in expansion and

an attempt either to develop a larger market or to get a bigger share of the existing market.

The reluctance of management to expand should perhaps not be criticized too severely. In the period from 1945 to 1948 management lived in constant expectation of a Communist revolution. There had been, at the end of the war, sporadic plant seizures and a great deal of tension in which the Communists played an important role. Until 1948, most of the industrialists' efforts were directed to hoarding money outside the country so as to have a place to which to escape in case of a revolution. From 1949 to 1952, management went through another period of anxiety in the anticipation of a third world war. This was the period of increasing tension between the United States and the Soviet Union, culminating in warfare in Korea. It was, therefore, not until 1953 that Italian management in general felt that the basic conditions existed for a program of expansion. Since that time, substantial expansion has occurred in Italian industrial capacity. Furthermore, a fair number of executives show the same aggressive and dynamic identification of ego values with the welfare of the company which we have come to associate with the American businessman. It is conceivable, therefore, that this aggressive expansionist capitalism will become more prevalent in Italy.

Paternalism

Such developments are making headway only against strong psychological opposition. The guiding tradi-

tion of the Italian employer is that of the *padrone*: the boss who is like a father to his workers, who treats them as sons, whom he can boss around with relatively unlimited authority (and this is true in the family and not merely in industry), but who is supposed to be a benevolent autocrat. This cultural heritage naturally goes with a paternalistic pattern for industry—one in which the employer pays very low wages, but provides benefits in case of sickness, medical services, family welfare services, help for the workers' children, and so on. Symptomatic of this relationship is the use of language by bosses and workers. The Italian language has three common forms for the second personal pronoun *you*. One of these is the form which is used for addressing superiors; another is the form used for addressing children and servants; and the third is somewhat indeterminately between these two. Characteristically, the bosses speak to the workers in the form used for children, whereas workers in addressing their foremen and other superiors use the formal type of address. In every respect the class division seems much sharper and is more rigidly observed than would be true in the United States.

Given such traditions, it is not surprising that even large corporations maintain welfare programs which are much more extensive than those developed here. Many firms have doctors, lawyers, social workers, and even priests on the payroll to provide various forms of assistance to employees. The number of gifts, prizes, Christmas parties, and other company-financed programs is

very great. Many Italian firms have colonies at the seashore to which children of employees may be sent for a week in the summer. These welfare and recreational activities apparently stem back at least to Fascist times, and perhaps even to the pre-Fascist period. They do to some extent represent manifestations of guilt feelings on the part of the employer, but they also indicate some genuine concern with the welfare of people less educated and less fortunate than the industrialist himself. There is also a definite hope that such programs will weaken the Communist appeal.

An interesting example of a combination of paternalism and human relations program with a consciously elaborated philosophy behind it was one at Ottico Meccanica Italiana in Rome. This is a moderately small firm, manufacturing optical equipment, especially map-making equipment using high-level airplane photography; employment in 1956 was about 800. The family which owned and controlled this organization had a philosophy which, in effect, said that the workers in Italy needed to learn something about economic responsibility, self-discipline, and self-control before they could plausibly be expected to function effectively in a political democracy. For this reason, so the owner said, they had been attempting to hand over certain responsibilities to the workers, especially in the field of philanthropic activities. A welfare committee, made up of representatives of the Commissione Interna, the white-collar employees, and management, had control of a budget which was used for various

forms of welfare work. This budget amounted to something over two million lire per year. Although such a sum (\$3,200) seems small enough by American standards, it was nevertheless a substantial one in the eyes of the employees and its administration was taken very seriously. For example, when management had been administering this program, requests for sickness benefits had been met without any personal investigation; the employees' committee, by contrast, frequently visited the home to see whether the situation really justified a request for financial assistance.

I was assured even by left-wingers that there was no discrimination against Communists on the part of the group administering the program. The result, however, of having four Communists (at different times) on this management board was that these individuals had withdrawn from the Communist Party. The owner believed that experience of this type, under a regime operated by the workers themselves, had tended to give Communists a different perspective on things, making them more amenable to cooperative activities with the management of the company. Management spokesmen insisted that none of these programs had been administered with any plan to weaken the unions, and I found no evidence to contradict this assertion.

At Ottico Meccanica, as at many other firms with progressive managements, there were other "innovations" of a type quite familiar in American industrial relations. They had, for example, a suggestion system, a plant newspaper, and some minimal degree

of training in human relations technique for supervisors.

Supervisory Training

Training for better human relations is receiving a great deal of attention in the north of Italy; a new institute was organized a few years ago called IAI (Institute for Industrial Training) which has taken the old TWI (Training Within Industry) programs and translated them into Italian. This material, unfortunately, is often taught in a mechanical way without being adapted to the needs of the Italian situation. However, there was some evidence of a genuine understanding of the potentialities of human relations training, and work was being done to develop a system which took account of the uniquely Italian aspects of these problems. The Montecatini Company, for example, had instituted human relations training for supervisors in 11 out of a total of 81 plants. These were scattered throughout the country and involved different types of productive facilities so that management could gain experience with the technique and with its probable consequences. It was their intention afterward to revise their training manuals to take account of the experience in these pilot plants.

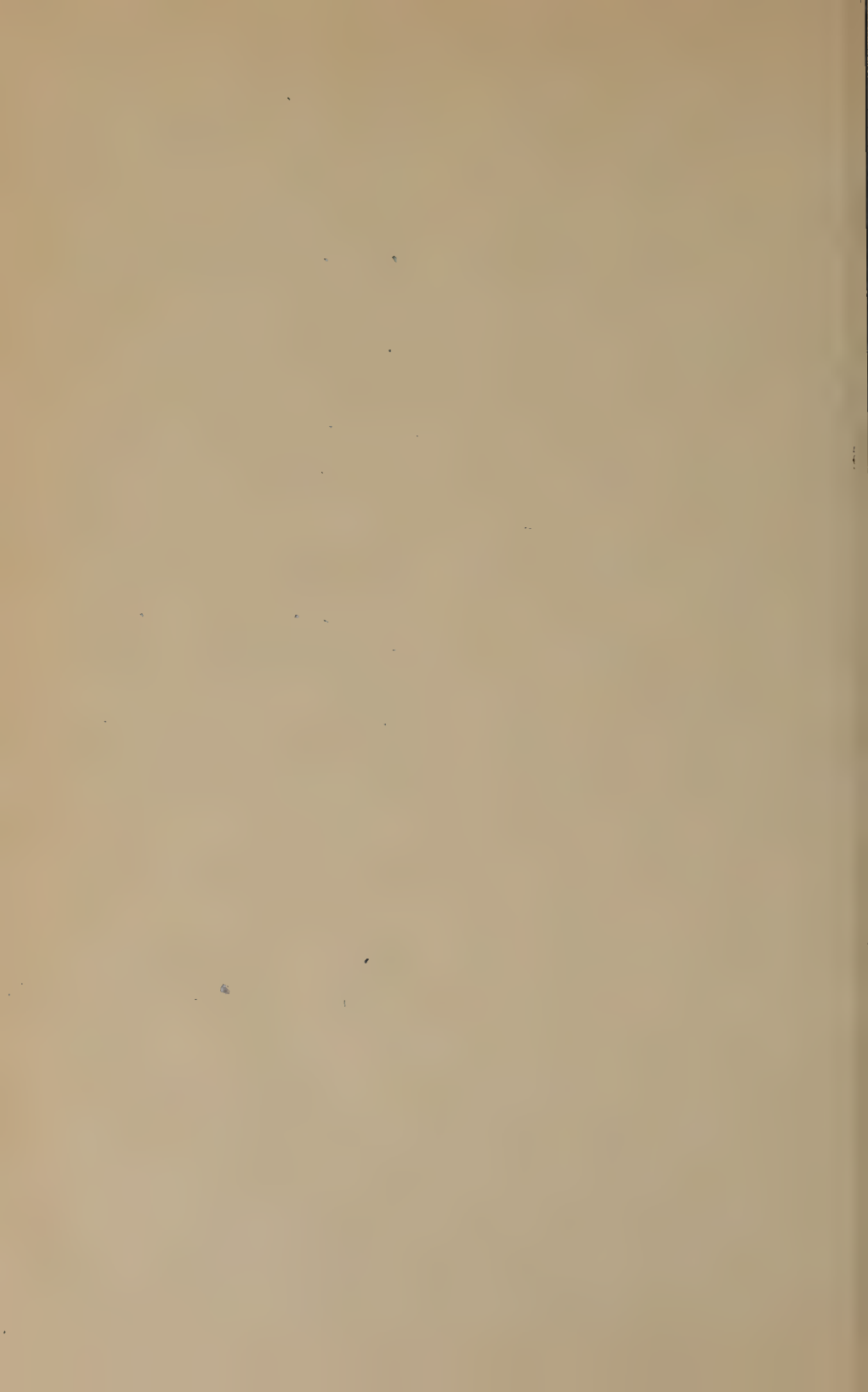
Along with such developments have gone other indications of a changing managerial climate. There are now two advanced institutes for training of managers, IPSOA in Turin, and ISDA in Rome. Although some of the work done in these schools is slavish imitation of American procedures, other training work has been adapted to Italian conditions and more is in proc-

ess. Techniques such as time-motion study, job evaluation, psychological testing for employee selection, and other modern methods are being introduced. There is good evidence, then, that managerial thinking is being modernized. This augurs well for progress in union-management relations.

The essential ingredient which is at present lacking in the Italian situation is direct personal contact between managers and union leaders. The institutional pattern described earlier renders virtually impossible any direct exchange of views, and consequently any learning by one side of the needs, problems, and values of the other. While many factors have contributed to the maturing of union-management relations in the United States, an important one is that of increasing mutual understanding. As an executive learns more about unionists, their behavior becomes more predictable and also seems more reasonable to him. Distrust and suspicion have declined. Accommodation is now

achieved with far greater ease than twenty years ago.

As the Italian unions move toward local factory organizations, more local contacts will occur. At first it is likely that these will be full of friction, but they will supply the firsthand knowledge which is necessary for understanding. If economic goals replace political aims, as is the present trend, this will also render cooperation easier. If, as now appears likely, more managers abandon paternalistic tactics of fostering dependency and instead facilitate self-determining, responsible worker behavior, this too will help. The shift from a capitalism oriented to limited production and security toward one based on expansion and mass markets, with a reasonable approach to full employment, is also indispensable. Since all of these favorable trends are detectable in the Italian scene, the long-run outlook for union-management relations justifies a guarded optimism.



Value Judgments and the Formulation of Economic Policy Proposals

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THERE IS TODAY fairly general agreement among economists that value judgments necessarily enter into, and indeed play an important part in, the formulation of economic public policy proposals. With respect to the closely related question of whose value judgments should be used, however, there is widespread disagreement.

Inquiry suggests that lack of agreement as to whose value judgments should be used stems in part from an even more fundamental disagreement on the various points at which value judgments enter into the process of formulating economic public policy proposals, and, therefore, on the nature of those value judgments.

The term "value judgment" is sometimes loosely used to mean merely a decision made in accordance with the basic or fundamental set of values of an individual or group of individuals. To be of use in the area of public policy, however, the concept must be defined in a manner which is at once more rigorous and broader than this.

The attitudes and the behavior of every individual or group are influenced, not merely by a few important basic values, but also by a host of lesser values. Some of these may provide ends or ultimate goals, whereas others may provide means or intermediate goals.

For practical purposes, therefore, it is more satisfactory to define a value judgment as a decision based on a comparison and rating of alternatives with respect to their usefulness, excellence, or desirability.

I.

Value judgments are made in all situations in which there is a possibility of alternatives, and in which value (i.e., usefulness or desirability) is present in these alternatives. Since each individual sets a higher value on some things than on others, two individuals possessed of similar training, knowledge, and intelligence may, when confronted with the same situation, make different value judgments. Moreover, since individual preferences and systems of value tend to change with the passage of time, an individual confronted with the same situation at different periods of his life may make different value judgments on each occasion.

The correctness of a value judgment may be ascertainable in the sense that in any situation, if all the facts are known, and if all the alternatives are ascertained and their consequences fully explored and evaluated with reference to a particular system of preferences or values, only one value judgment can be correct. But the correct-

ness of a value judgment is always relative, rather than absolute.

Most economists would probably agree on the necessity for exercising this type of judgment in deciding how to analyze and evaluate the economic situation or problem to which policy proposals refer. Most of them would probably also agree on the necessity for exercising this type of judgment in determining what techniques, in the light of purely economic considerations, seem most likely to achieve the desired modifications in the situation or the desired solution to the problem. Moreover, there is little, if any, disagreement as to whose value judgments should be used for these purposes. Practically all economists would agree that the value judgments they employ must be their own.

Beyond this point, however, there is little agreement. In fact, some economists feel that no value judgments other than those involving purely technical or economic considerations enter into the formulation of public policy proposals by themselves, and that no other value judgments should enter into the formulation of public policy proposals by other economists. Examples of this point of view are to be found in the writings of Edwin G. Nourse, a former chairman of the Council of Economic Advisers, and Milton Friedman, professor of economics at the University of Chicago and a frequent participant in discussions of economic policy.

Friedman maintains that "differences about economic policy among disinterested citizens derive predominantly from different predictions about the economic consequences of taking ac-

tion . . . rather than from fundamental differences in basic values. . . ." Nourse apparently believes that different social value judgments do exist and may influence public policy proposals, but he maintains that economists can make their analyses and give realistic advice on economic issues without bringing into play such "social" value judgments. The administrators or legislators to whom the proposals are submitted can then introduce such modifications as are necessary to make allowance for "social" and political considerations.¹ In practice, this attitude is difficult to maintain consistently, so that even those economists who proclaim it most vigorously sometimes find it necessary to qualify the statements they have made on this subject in such a way as to rob them of much of their apparent force.²

Certain other economists are strongly convinced that this is an unrealistic and inadvisable attitude, and that it is basically fallacious as well. To the writers it seems abundantly clear that there are few, if any, economic issues which can be adequately and realistically resolved by the promulgation of public policy proposals formulated in the manner suggested by Friedman and Nourse. A good many more value judgments than either Friedman or Nourse recognize necessarily enter into the formulation of such proposals, and

¹ Milton Friedman, *Essays in Positive Economics* (Chicago: University of Chicago Press, 1953), p. 5; and Edwin G. Nourse, *Economics in the Public Service* (New York: Harcourt, Brace and Company, 1953), pp. 502 ff. *et passim*.

² See e.g., Nourse, *op. cit.*, pp. 498-99, and Friedman's "Rejoinder" to a note by Henry M. Oliver in *Review of Economic Statistics*, Vol. 35 (August, 1953), p. 252.

these value judgments are sufficiently varied in nature so that they deserve to be carefully distinguished and not merely grouped together under the convenient, but inadequate, terms "economic," "social," or "political" judgments, or that still more convenient but assuredly more inadequate term "basic values."

The attitude expressed by Nourse and Friedman implies that all interests are reconcilable, and that all interest groups will be benefited, if policies based on the "purely economic point of view" are promulgated. This is an unrealistic point of view, since it is necessary to know the power of different groups in order to know what changes are feasible. The reaction and the power of different groups may even determine the economic consequences of certain policy proposals.

The ultimate incidence and effects of a general sales tax, for example, might very well be determined by the ability of organized labor to secure corresponding wage increases. Whether an increase in taxation of corporate earnings will have a detrimental effect on economic development depends largely on the reaction of corporate executives and whether or not they allow it to deter them from further investment.

Even if agreement with respect to certain basic values could be assumed to exist, it would not dispose of the problem. Value judgments exist with respect to means, as well as ends, and also with respect to the inevitable outcome of certain economic policy proposals other than the ultimate ends they are designed to achieve. Frequently in matters which involve the

"national interest," much more than purely economic considerations are involved, and the economist must necessarily take these noneconomic considerations into account in formulating public policy proposals. Economists may be asked to give advice or aid in situations which require the weighing of economic effects against certain other effects; or they may be asked to help in the selection of one set of economic consequences rather than another, even when no conflict between different interest groups is involved.

Thus it appears that value judgments enter into the formulation of economic policy proposals at numerous points, and that these value judgments are not all similar in nature. The following list, based on the foregoing discussion, recapitulates in somewhat more systematic fashion the main points at which value judgments (or the process of making value judgments) impinge upon the process of formulating public policy proposals. It should be considered not as an exhaustive list, but rather as one suggestive of the variety of the value judgments which are involved.

- (1) Analysis and evaluation of the situation or problem to which the policy proposals refer.

- (2) Determination of what the desired modifications are. This will involve consideration of the interests of different groups, and the determination—in some cases even the clarification—of their values or preferences. It will frequently involve consideration of values other than purely economic values. It may also involve the weighing of one set of economic consequences against another, and the weighing of

economic effects against other effects.

(3) Determination of techniques which, in the light of purely economic considerations, seem most likely to achieve the desired modifications.

(4) Determination of the desirability of those techniques which appear satisfactory from an economic point of view, when account is taken of the values or preferences pertaining to the techniques themselves.

(5) Re-evaluation of the degree of economic success which each apparently satisfactory technique is likely to achieve, on the basis of a consideration of such other factors as the reaction and power of different groups.

(6) Determination of the desirability of techniques with respect to consequences other than the ultimate ends they are designed to achieve. This would involve consideration of non-economic, as well as economic, consequences.

II.

Once it is recognized that value judgments enter into the formulation of economic public policy proposals at numerous points, and that these value judgments are not all similar in nature, it becomes apparent that there can be no single answer to the question of whose value judgments the economist should use in formulating public policy proposals. In some cases he must use his own value judgments; in other cases it is preferable for him to accept the judgments of others.

The matter of time — the time at which the proposals are formulated and offered, the time at which they are adopted, and the time they are expected to remain in effect — also

has an important bearing on the appropriate answer to the question of whose value judgments to use in formulating economic policy proposals, and some confusion on this point undoubtedly helps to account for the divergence in the attitudes of different economists.

Experience indicates, for example, that in time of war or some other grave national emergency, the value judgments of very different interest groups will tend to merge or fuse with respect to certain basic economic issues. With the return of more normal times, however, the value judgments of these groups will tend to diverge again. The decision of the responsible economist as to whose value judgments to rely on in formulating policy proposals will necessarily differ according to circumstances.

It seems fairly clear also that if an economist is asked to recommend a proposal designed to ameliorate a situation which requires immediate attention, he must, if he is realistic, take into consideration the value judgments of those who will have to approve his recommendations before they are adopted and those who will have to conform to them if they are to be effective. On the other hand, an economist who is asked to recommend a long-range program for dealing with a chronic problem may base his proposals on an entirely different set of value judgments, believing that a satisfactory long-run solution can be achieved only after education and experience have modified existing value judgments.

An even greater source of confusion and an even more important reason

for the disagreement on whose value judgments should be used by the economist in formulating public policy proposals — although again a reason that has not been clearly perceived — is the fact that persons with technical training in economics, who call themselves “economists” (or who are called “economists” by others), and who engage in the formulation of policy proposals, are not all playing the same role in society or pursuing the same ends. In fact, the very same economist may at different periods in his life play different roles and fulfill different functions. The appropriate answer to the question of whose value judgments should be used by an economist must depend to a considerable extent on the particular role he is playing when he offers his proposals, and the purpose he expects to achieve in offering them.

An economist employed as a civil servant, for example, who is asked to propose measures for implementing certain existing legislation, should take into account the value judgments of those who framed and passed the legislation, and of those officials who are responsible for administering it, if his proposals are to be useful and if he is to fulfill his job in satisfactory fashion. In some cases he may also have to consider the value judgments of persons other than legislators and officials whom his administrative proposals will affect. But economists other than civil servants who deal with this very same problem may appropriately base their proposals on value judgments from very different sources.

Similarly, an economist outside the civil service who is consulted by government officials or by a legislative

committee interested in framing the legislation necessary to remedy a serious problem which is rapidly becoming even more serious must, if he is to be realistic, take into account the value judgments of those officials or legislators, of the other members of the legislature who will consider his proposals, and of those citizens who will, directly or indirectly, be affected by the legislation. If he does not, he cannot satisfactorily perform his duties. But here again it is obvious that economists in other roles may appropriately formulate proposals on the basis of very different value judgments.

Additional examples might easily be provided, but would add little, if anything, to the weight of the argument. It may be useful, however, to list briefly some of the other functions which economists perform in our society, and which will have a bearing on the sources of the value judgments they may appropriately use in formulating public policy proposals.

(1) Instructors in colleges and universities, adult education groups, and so on.

(2) Research workers and writers for academic journals.

(3) Speakers and writers for the general public.

(4) Employees of, or consultants to, individual business firms.

(5) Employees of, or consultants to, special interest groups such as industry groups, business associations of various types, trade unions, or farmers organizations.

(6) Employees of, or consultants to, so-called “public interest” groups, such as the League of Women Voters.

(7) Employees of, or consultants to, international organizations such as the United Nations and its affiliated agencies.

It has been noted that the same economist may at different periods of his life play different roles. Sometimes he may even be playing two or more roles concurrently. Perhaps it should also be noted that every economist, no matter what part he is playing or has played at any time, always has the same right as any other citizen to think and to express his opinions on any subject of public concern as a responsible private citizen.

III.

Of course, even when an economist is playing a role in which it would appear that he can at many points simply accept the value judgment of others, he may nevertheless have an important job to do in connection with those value judgments. This is particularly true in cases where the value judgments furnished him by others are incomplete for the purpose at hand so that he must add to them, or where they are incompatible so that he must decide which to accept and which to disregard. Even if these conditions do not exist, the time granted him for the preparation of his proposals, and the anticipated time at which they will be adopted or during which they will be effective, will frequently make it necessary for the economist to alter the value judgments furnished him before he can formulate any practical proposals. In still other cases, although it may be appropriate for him to use the value judgments of others, the economist may first have to

solve the problem of determining what those judgments are, and the manner in which he approaches that problem will involve the use of his own judgment. In addition, as we have already noted, the technical features of economic policy proposals and the analysis on which they are based are necessarily influenced by the value judgments of the economist who prepares them.

It is neither necessary nor practicable to draw up a list of rules or principles by which economists engaged in the formulation of public policy proposals can determine whose value judgments to use under all the varying circumstances which may possibly exist. It is practicable, however, for every economist engaged in the formulation of public policy proposals to be constantly aware of the many stages at which value judgments affect his work, and also of the nature and source of the value judgments he is using at each stage. Moreover, it is highly desirable for him to do so, since failure or neglect in this respect makes it difficult, if not impossible, for him to think clearly.

The responsibility of the economist does not end at this point, however. For if his proposals are to be properly understood and evaluated, it is not sufficient that he himself recognize the nature, source, and significance of the value judgments which have influenced him in the formulation of those proposals. These matters must also be recognized by the persons who will consider and act upon his proposals, and for this reason should be set forth explicitly by the economist.

It seems to follow that when an economist fails to state the nature,

source, and significance of the value judgments affecting his proposals, or when he disclaims any consideration of "social" or "political" value judgments in the formulation of those proposals, it is particularly important that his proposals be carefully examined to determine the character of the value judgments which are necessarily implicit in them, although unacknowledged.

As their final point, the writers would like to suggest that not only economists but all persons concerned

with the field of economic public policy should recognize that value judgments and desired ends are not fixed, but are in a constant state of flux. The formulation of value judgments and ends is a continuous process. This fact makes the determination and utilization of value judgments more difficult and more challenging than they would otherwise be. But it also means that the work of economists may itself affect the formulation of value judgments and ends by others.

Colombia's TVA: The Cauca Valley Corporation*

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THE REPUBLIC OF COLOMBIA has made its greatest progress during the postwar period. Since 1945 the 13 million Colombians have more than doubled their industrial production. In fact they have made greater strides in the past decade than they made in the fifty years previous. As a result, their rugged and richly endowed nation is enjoying the most prosperous years in its 450-year history. One of the developments currently under way which holds much promise for the economy is scarcely known outside Colombia. Our interest in the success of this development, known as the Cauca Valley Corporation, is great for it was patterned after our own Tennessee Valley Authority. The project, when completed, will contribute significantly to the economic and social welfare of the nation. Before considering the project, familiarly known as the CVC, brief attention should be directed to the over-all national economy.

I.

Colombia is rich in minerals as well as in agricultural products. The Paz del Rio steel mill, built within the past few years, uses native ore deposits. Iron ore deposits near the mill are

estimated at 100 million tons and a nearby high-quality bituminous coal deposit is estimated at 10 billion tons. This nation is now the second largest oil producer in South America. The Andes are the world's largest source of emeralds, and the gold and silver which brought the Spanish into the heart of the country in the mid-sixteenth century are still produced in quantity.

The one great retarding factor in the economic development of Colombia is lack of transportation. For centuries the north-south traffic was by water over the long rivers that flow in a generally northern direction. This was slow, hazardous, and generally inefficient. Burros were used for packing merchandise over the Andean chains, of which there are three: Eastern (Oriental), Central, and Western (Occidental). In recent years railroads have been built between the cities and along the Magdalena River from Puerto Salgar to Santa Maria on the Caribbean coast. Thus products will soon be moving faster between the major inland cities such as Medellín and Bogotá, and the Caribbean sea coast. An ambitious highway program was begun in 1951. With the finances and technical aid provided mostly by the United States, the badly needed highway network may become a re-

* The writer is greatly indebted to Mr. William J. Hayes, Consultant to the CVC, Cali, Colombia, for much of the information presented here.

ality.¹ The Pacific port of Buenaventura, which handles about 60 percent of the nation's exports and imports, has had a semblance of a highway and truck road only since 1945 to the great city of Cali. In the past five years the road has been improved and now carries a heavy load of truck freight from the seaport.

The Cauca Valley project, the TVA of Colombia, was not hurriedly devised. For many years a few leaders in the three departments (states) of Cauca, Valle, and Caldas sought ways and means whereby they could develop the resource potential of the region. These states lay in the Upper Cauca River Basin, an area richly endowed in climate and soil which, if efficiently developed, could bring great economic benefits to the states and to the nation. As early as 1928 studies were made of agricultural and hydroelectric resources of the area. The rich agricultural potential and the manufacturing possibilities of the cities both invited modern development. Finally, plans were drafted in June, 1952, which sketched a pattern for economic development in the Upper Cauca River Basin that led to the present Development Corporation.

Early in 1954 David E. Lilienthal, former chairman of the TVA, visited Colombia at the invitation of the President of the Republic, examined the region, and submitted a favorable report. The report reflected the experience of the TVA program, which,

¹ The International Bank for Reconstruction and Development has made three loans for highway purposes, the last one in June, 1956, for \$16.5 million for 15 years at 4% interest.

twenty years ago, faced problems and opportunities comparable in considerable degree with those found in the Upper Cauca Valley. The report tended to crystallize and give impetus to what had been largely fond hopes for many years. As a result, the Corporacion Autonoma Regional del Cauca (also known as the Cauca Valley Corporation or, briefly, CVC) was established by Legislative Decree 3110 of October 22, 1954; its charter was approved by Legislative Decree 1829 of July 5, 1955. This was the first step toward a systematic development of Colombia's natural and human resources through a nonpolitical, decentralized regional agency. In addition, the agency was to provide a training center for those participating in the regional development for the entire nation.²

The Autonomous Regional Corporation of the Cauca is, in a sense, the direct descendant of our own TVA, since it is designed to accomplish many of the same objectives. We can view the Colombian project sympathetically and hopefully for it promises to be as rewarding as our own TVA has been. The Corporation draws heavily on that part of the TVA experience which is applicable or adaptable to its problems. It also has drawn to some extent from

² All data references are from *The Autonomous Regional Corporation of the Cauca*, International Bank for Reconstruction and Development, November, 1955; *Corporacion Autonoma Regional del Cauca, The Unified Development of Power and Water Resources in the Cauca Valley*, January, 1956; *CVC, un Programa Regional*, Cali, November, 1956; *Eleventh Annual Report 1955-56*, International Bank for Reconstruction and Development.

the international technical assistance operations experience of the United States and of the United Nations. On the basis of these experiences it has set up a plan of organization that defines the programs, policies, procedures, organic structure, and spheres of activity of the component units. The initial plans described the over-all program of the Corporation. Details were to be filled in as the program developed without major changes in the organic structure.

II.

The area in which the CVC operates covers the drainage area of the Upper Cauca River Valley and the neighboring Pacific slopes. (See Chart 1.) Three departments are sharing in the costs and in the benefits of the project. The water-resource development is distributed among the three departments as follows:

	<i>Total area</i>	<i>Area within the CVC develop- ment area</i>	<i>Percent of total</i>
	sq. km.	sq. km.	
Cauca	30,200	11,410	38
Valle	20,940	20,940	100
Caldas	13,370	4,670	35

The CVC region contains some of the richest and most populous areas of the Republic. It is old in history but young in the modern world. Two of the provincial capitals, Popayán and Cali, were founded in 1534 and 1536 respectively. For most of its history the region has been extremely isolated both from other regions of Colombia and from the outside world. Bogotá, the capital city, could be reached by land only by crossing the Cordillera Central, descending into the Magdalena River

Valley, and then climbing the flank of the Cordillera Oriental to reach the high plateau (8,600 feet) of the Cundinamarca where Bogotá is located. Within living memory the trip required two to three weeks on mule-back. Today one may fly over the mountains from Bogotá to Cali in an hour. For centuries the connection between Cali and the Pacific port of Buenaventura required passage over the rugged Cordillera Occidental, so most of the trade came in from Quito. Not until 1915, two years after the Panama Canal was opened, was the port accessible by rail; only in 1945 was merchandise hauled to Cali from the port by truck.

Thus the region of the CVC is scarcely fifty years old in terms of modern methods and development. Today, however, the three states are thriving with a population estimated at 3 million, or about 25 percent of the total population of Colombia. They produce about the same percentage of the national income so that their growth and well-being significantly affect the whole national economy. The present strength and future promise of the Cauca Region arise in part from its great natural resource diversity and in part from its location, which enables it to serve all parts of the Republic and at the same time have access to the Pacific and the Atlantic.

The objective of the Corporation is the same as would be expected of a similar project any place in the world, viz., to enhance the welfare of the local population. By assisting in the economic growth and by raising the in-

come of the area it makes a direct contribution; indirectly, the whole economy gains. The Corporation brings together under and within one responsible agency skills necessary to develop the latent resources of the region. Power, flood protection, irrigation, drainage, soil conservation and reforestation, improved agriculture and livestock, development of the mineral resources, improvement of all means of transportation, social and educational rehabilitation are all the concern of this single agency. The Corporation obviously cannot accomplish all these objectives in a short time.

Although not all of these objectives were common to our TVA, it has, nevertheless, served as a prototype for this program and for similar programs in such diverse places as the Damodar Valley in India, the Northwest region of Brazil, the Helmand Valley in Afghanistan, the Gediz Valley in Turkey, the Artibonite Valley in Haiti, and the large rehabilitation project in the south of Italy. In common with the TVA region, the CVC area was plagued with flood problems that could not be solved by sectional or sporadic efforts. Unlike the TVA which serves a region that was included in what was formerly characterized as the number one economic problem area of the United States, the CVC region contains some of the most prosperous and richest sections of Colombia together with other sections that are at the bottom of the economic scale of the country. The per capita income in Caldas is close to the national average,

whereas in Cauca it is only 40 percent. Per capita income in Valle is 30 percent above the national average but 25 percent below the Department of Cundinamarca, in which Bogotá is located, and 13 percent less than the Department of Antioquia, of which the thriving city of Medellín is the capital.

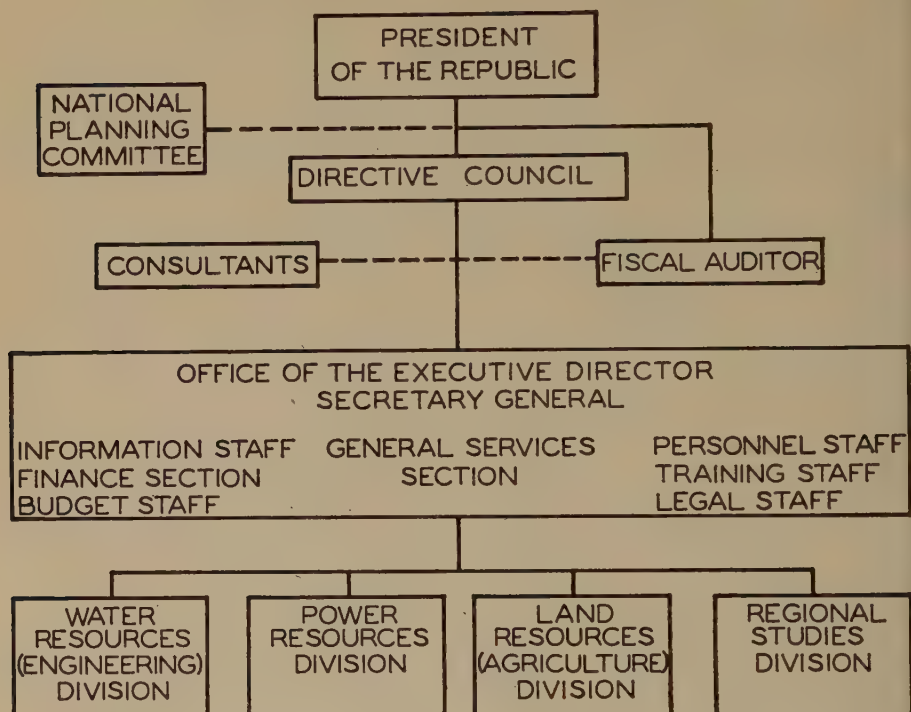
In common with the TVA, the role of electric power as the revenue producing partner in the CVC program can make possible the other benefits projected in the over-all plan. In contrast to the United States, Colombia is much more limited in its supply of public investment capital and as a consequence it will have to be content with a much slower rate of development, even though the needs are equally or even more urgent. The stability of the government and the uninterrupted economic growth of the nation will have an important determining effect on the success and completion of the entire program.

III.

The Autonomous Corporation is a self-governing, nonpolitical organization. It was created by the national government which, in conjunction with the three departments which sponsored it, has the responsibility for its success. The Corporation, however, must assume the responsibility for both the short- and long-run plans. Although the need for complete political independence is recognized, economically the Corporation must depend upon financial support from the participants.

Chart 2 shows the relationship of

Chart 2. Plan of Organization of the CVC



the several divisions. Full responsibility for research and final execution of plans within the general framework rests with each subdivision.

The specific duties are defined for each participant and division in great detail. Heavy responsibility for recommendations of both ways and means as well as policies rests with the water, power, land, and regional divisions. They are expected to keep abreast, or even ahead, of their prescribed duties and policies. The self-perpetuating part of the program is indicated in that every division has the responsibility of training not only their own employees but also personnel for other projects. (The procurement of skilled persons

has been a problem; it has been met, to a limited extent, by importing technicians.)

At the request of the President of Colombia, the International Bank for Reconstruction and Development sent a mission to Colombia early in 1955. Its report was made in November of that year. The mission, which firmly supported the development program, defined three types of expenditures: first, the overhead administrative costs of the Corporation which were not assignable to any project or activity; second, expenditures upon the Corporation's own projects or activities; third, expenditures upon projects which the Corporation will sponsor but

may not execute unless requested to do so as an agent for some other authority or institution.

Inasmuch as some years may elapse before the Corporation earns any net profits, funds must be supplied by its "shareholders," the national government and the three departmental governments. It was therefore proposed by the IBRD that the shareholders contribute funds in the following proportions:

National government.....	35%
Departmental governments:	
Caldas.....	10%
Valle.....	50%
Cauca.....	5%
	<u>100%</u>

It is obvious that the national government should participate in the overall financing, for the whole economy benefits. The three departments, however, benefit the most directly. The mission then recommended a percentage which each department should bear in providing capital for the development. The specific amount which each department would contribute was computed by a formula which related the 1954 budget of each department to the amount of territory of each in the development area.³ Since one department (Valle) stands to gain more than the others, its share of the development cost is greater. The scheme combines the benefit theory with the ability-to-pay principle.

The first projects planned are electric generation and transmission facilities

and flood control. These are both costly and time consuming. The power plants will earn revenues before any other enterprise, and these revenues can be used toward amortizing the costs of their own construction and for other expenditures. The over-all plan calls for great efficiency in operation. Each separate activity is expected to show its own revenues, expenses, assets, and liabilities, so that accurate financial costs and results can be ascertained. The fully self-liquidating activities and the wholly subsidized or nonreimbursable items are to be kept distinct. Therefore, the revenues from self-liquidating activities such as electric power generation are to be applied first to sustain that revenue-producing activity.

The main sources of funds in the developmental stage will be "aportes" (nonvoting grants of capital without interest or dividend rights) and borrowing from banks through bond issues. The borrowing by the Corporation in its own name is limited. It can borrow only for the type of enterprise whose expected revenues will be sufficient to service the loans or bond issues. Although it appears that rather stringent borrowing limitations are imposed on the Corporation, they have the effect of forcing careful planning and efficient use of assets as these are made available. There is no likelihood that the Corporation may launch an excessively large number of projects, planned or partially planned, at one time.

The interdependency of the Autono-

³ Details of the somewhat complicated formula appear in the *Mission Report*, p. 4, footnote.

mous Corporation and the sponsoring governments, departmental and national, is a distinct feature. The latter bear great responsibility for the general success of the project, and as sponsors, they cannot very well withhold financial aid. In turn, the Corporation has a clear mandate to set up a broad and efficient program of resource development. The project is unique as a joint economic-administrative venture of great promise. The "apertes" (grants) of the sponsors must be sufficient to guarantee development during the years before the projects begin to earn revenues. The Corporation in turn must begin to show earnings and contribute to the levels of national income and welfare at both departmental and national levels. Thus the Corporation will have to move carefully but reasonably fast. The great demand for electric power in the rapidly growing cities of the Cauca Valley would have forced the private development of electric power units but at an impossibly slow rate. It is only the Corporation which plans the over-all development of the area's potentialities.

IV.

The CVC charter was approved July 5, 1955. Less than two years has elapsed since that date, which is perhaps enough time to permit some assessment of the primary developments and bring into the open some of the obstacles encountered. The original plan called for extremely broad objectives of great significance. Planning was one thing but financial implementation has proved to be quite another. There has been a clash of public and

private interests mainly in the power development projects. Antiquated methods of land use which have accentuated the need for better land utilization can only be changed by long and patient educational extension programs. It appears, however, that the financial aspects are of the greatest concern.

It was pointed out earlier that the IBRD plan called for joint national and departmental contributions to finance the development in the early stages and until the Corporation could get some earnings of its own. Financing by this method has met with only limited success. The funds contributed thus far (February, 1957) have come from the following sources: (1) contributions for general CVC purposes; (2) contract contributions for regional extension services; and (3) a property tax.

Contributions for general purposes amounting to 250,000 pesos were made by the national government in 1955. The Department of Valle contributed 1,700,000 pesos in 1956 and has a million peso item in its budget for 1957. The other two departments, Caldas and Cauca, have made no contributions.

The need for regional extension services is pressing. It was believed that this phase of the work could be undertaken with the least delay, for it did not require the planning and capital equipment that were essential to power generation projects. Accordingly, the Ministry of Agriculture and the three departments, Cauca, Caldas, and Valle, made a total of 1,202,420 pesos available in 1956. Of this sum the Ministry of Agriculture contributed 341,420,

Cauca 105,000, Caldas 336,000, and Valle 420,000 pesos. For the year 1957 the Ministry of Agriculture and Valle have budgeted somewhat larger sums, whereas the other two departments have withdrawn, at least temporarily, for financial reasons.

The use of a property tax as a source of funds is the most recent development. A law was passed (Decree-law No. 0160, January 3, 1956) which authorized the imposition of a local tax of 4 pesos per 1,000 on real property for financing the local CVC developments. The law has been in effect since July 1, 1956, but only in the Department of Valle, which will enjoy the greatest benefits and which is, currently, bearing the greatest share of the costs. It is estimated to yield at the rate of 10,000,000 pesos annually.

The same decree-law provided that the national government would assume directly the financing of the first phase of the hydroelectric and transmission system in a plant located at Calima, Department of Valle. A grid system would carry power to the nearby industrial areas which are inadequately supplied and therefore retarded in their development. Political and economic considerations have been both annoying and limiting factors in getting the projects under way, though the electric generating unit at Calima is under construction.

V.

It appears that, judged by North American construction standards, the entire CVC project should be further along. However, one must not rely too heavily upon such measurements. In

the light of present economic facts and the level of economic development, the prospects are encouraging. Evidence of Colombia's expanding economy is visible everywhere. As the economy expands, the possibilities of a fully developed CVC program become brighter. It is essentially a long-run plan.

The greatest problem affecting the whole Colombian economy is monetary and is directly related to her export account. Since coffee exports provide about 85 percent of export earnings, the price of this item in world markets is vital. When coffee prices are about a dollar a pound, a favorable balance appears in the dollar value of exports over imports. In the past two or three years coffee prices have been less than a dollar a pound and the export surplus has changed to a deficit estimated to be around \$165 million in 1956. These imbalances affect the stability of the peso and lead to inflation which has affected all costs and prices and introduced elements of instability which are very difficult to control. The lack of diversified exports places an unusually heavy responsibility on one export item which is highly competitive with other producing areas.

The issues which have tended to retard or slow down the CVC development are not entirely the same as those so frequently found in other so-called "underdeveloped" areas throughout the world. There are fewer institutional barriers to surmount in Colombia than in many other areas. The outlook is definitely modern, and higher levels of national income and consumption are acknowledged goals. The country's in-

dustries are, in many cases, duplicates of our own. The climate for foreign capital investment is favorable. The natural resources are many and virtually undeveloped. The broad objectives set forth in the CVC charter will be attained in time.

Despite discouragements the planning work of the CVC goes on. All the

projects dealing with power production and land reclamation and development are being worked out in detail and will be ready when they can be financed. Measured in terms of the potential for social and economic betterment, there is nothing comparable to Colombia's CVC in Latin America. Possibly it is unmatched anywhere else in the world.

Wage Increases and Unemployment: The Exceptional Cases

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THE BASIC OBJECTIVE of this paper is to discuss a series of cases wherein wage increases may *not* result in unemployment. These cases constitute real and apparent deviations from the law of labor demand.

Before undertaking this task, however, it is important to give explicit recognition to certain limitations. Two are significant: (1) The ensuing analysis is confined basically to individual labor markets and/or the relevant product market. Broader implications concerning the economy as a whole are not directly considered. (2) Speculation with respect to the potential sacrifice of *future* employment increases is largely omitted, except in those specific instances where prediction on this point is fairly evident. The discussion runs in terms of immediate or short-run employment implications; more nebulous long-run connotations have been generally ignored.

Economic Orthodoxy and the Law of Labor Demand

Orthodox (marginal productivity) analysis envisions a downsloping demand schedule for labor. Diminishing marginal physical product coupled (under less than perfectly competitive conditions) with an inverse relationship between price and sales results in a forward-falling marginal revenue product schedule which serves as a basis for the labor demand schedule.

A comparison of factor price (wage rate) under competition (or marginal wage cost under less than perfectly competitive conditions) with marginal revenue product permits the determination of the most profitable level of employment of that factor for the firm. Because of the downsloping nature of the marginal revenue product function, an increase in the price of labor,¹ given the stability of labor demand, is associated with a decline in the quantity employed, i.e., an increase in involuntary² unemployment. In terms of the cost analysis of the product market, an increase in wage rates will, other things being equal, cause an upward shift in the relevant cost curves. Given product demand, and therefore marginal revenue data, this will result in a drop in quantity sold and unemployment.

It is frequently observed, however, that in practice wage increments may be associated with increases, decreases, or no change in the quantity of the specified type of labor employed. How

¹ For simplicity's sake, unless otherwise specified all wage increases will be regarded as direct increases in the money compensation of labor as opposed to "disguised" or "implicit" increases in the form of hours reductions, pensions, and other fringe benefits.

² Of course, from the standpoint of the union, unemployment may be foreseeable and an accepted sacrifice resulting from a wage boost. Nevertheless, such unemployment is "involuntary" from the individual worker's point of view.

is this conflict between reality and theory to be explained? In part on the basis of situations exceptional to the theory.

It will be convenient to classify the exceptional cases under four general headings: (1) *true exceptions*, those cases where market peculiarities of a more or less permanent nature work against the functioning of the law; (2) *disequilibrium exceptions*, cases where an initial disequilibrium or unstable equilibrium negate the operation of the law; (3) *dynamic exceptions*, cases where a violation of the static assumptions underlying the law prevent its accurate application; and (4) *institutional-technological exceptions*, situations wherein technical considerations, institutional (re)arrangements, and/or noneconomic forces tend to render the law inapplicable. Lines of demarcation between the specific exceptional cases are not completely clear, although reasonably so. Furthermore, in some cases the classification of particular exceptions under the enumerated fourfold headings will of necessity be somewhat arbitrary.

The Exceptional Cases

True Exceptions

There are five cases which constitute true exceptions. These are the cases of inelastic labor demand, inflexible product pricing, monopsonistic exploitation of labor, uncertainty, and an unorthodox labor supply schedule.

(1) The first and most obvious exception is that involving relatively inelastic product — and therefore labor — demand. This situation permits only a very small decline in quantity sold

and thus employment as a consequence of wage increases. Hence the normal attrition rate for labor may offset a considerable portion of the resulting unemployment so that involuntary unemployment is small or nonexistent. The cause of the relative inelasticity may be related to or independent of union policy. A relatively low ratio of labor to total costs and considerable progressivity in the corporate tax structure wherein wage rate increments have a considerably smaller impact on profits *after taxes* than would be the case if such a tax did not exist are notable exogenous factors contributing to the inelasticity of the demand for labor.³ Most prominent endogenous factors are strong union security arrangements which severely limit substitutes for union labor. (See pp. 16-18.) Needless to say, this first case is not an "exception" in the strict sense of the term, but is simply a situation wherein the operation of the employment aspect of the law of labor demand is checked.

(2) A group of true exceptions center around oligopoly-monopoly market structures wherein economic profits generally exist. In this case there is the possibility that wage costs may increase, as the union succeeds in obtaining higher wage rates, without the sacrifice of employment in the ranks of the union. This is because higher costs may come at the expense of business profits or payments to other factors of production. As a matter of fact, the union — in collusion with or in-

³ See John T. Dunlop, *Wage Determination Under Trade Unions* (New York: Augustus M. Kelley, Inc., 1950), p. 35.

dependent of management — may actually aid in achieving and fostering excess profits so as to share in these abnormal returns, e.g., certain segments of the building trades.

In the oligopoly case involving independent pricing policies, the product demand schedule is ordinarily conceived of as kinked at the existing or customary price. This implies a discontinuous marginal revenue schedule and the possibility that higher wage costs will leave product price and the profit-maximizing levels of output and employment unchanged. In such a case wage increases need not be at the expense of business profits. Instead, they may represent an enhancement of the exploitation of nonlabor factors of production.

Similarly, with collusive oligopoly in the sale of product, a wage increase may be ignored. The fact that collusive oligopolists are generally desirous of avoiding "strain on the controlling mechanism" and "defections from the agreement" may cause the group of firms to maintain the existing product price in the face of considerable wage cost increases.⁴ The fact that such increases may have considerably different cost impacts upon the various firms may also contribute to this price in-

flexibility. Hence, with both independent and collusive oligopoly, wage cost increases need not be reflected in price increases and concomitant declines in sales and employment. The specific outcome will depend, of course, upon a multitude of factors, for example, the size of the wage increment, the market and profit situations of the firms, the phase of the cycle, and the effectiveness of the collusive agreement.

The monopoly situation may be similar to that of collusive oligopoly, provided that such restraining forces as the fear of government regulation and/or antitrust action, the anticipation of adverse public opinion, and the fear of potential competition work against price increases as a complement to increasing wage costs. In such an eventuality, the firm will settle for a superior rather than a maximum profit. If barriers to entry are not strong, such behavior would be perfectly rational in the long run.

(3) Closely related to the oligopoly-monopoly cases just discussed is the case where labor is exploited, that is, paid a wage rate less than the value of its marginal product, because of monopsonistic power resting with the particular firm or industry. Such exploitation involves a marginal wage cost schedule which lies above the average cost (wage rate) of labor schedule. Given sufficient bargaining strength a union can, within limits, raise wage rates without sacrificing employment. Wage rates fixed or formalized by the bargaining agreement have the effect of making marginal wage cost and the average cost (wage rate) of labor co-

⁴ Joe S. Bain, *Pricing, Distribution, and Employment* (New York: Henry Holt and Company, 1948), p. 188. The possibility that wage pressure will result in quality or quantity (in the sense of changing the size of each unit of output) deterioration — as opposed to price increases — cannot be ignored. Such deterioration, being somewhat more subtle than price increments, may be expected to result in smaller declines in sales and employment. Quality and quantity deterioration may or may not alter labor requirements.

incide up to the point at which the fixed wage ceases to be effective. As a matter of fact, wage-fixing by unions might prompt the employer to *increase* the volume of employment as he pursues maximum profits at the new and higher wage rates. Much the same can be said of union wage-fixing in the presence of employer collusion in the hire of labor.⁵

(4) Whether a particular allocation of economic resources is rational or efficient depends partly on the accuracy of entrepreneurial foresight in determining the amount of uncertainty the firm faces with respect to future prices, costs, output levels, and so forth. As uncertainty is reduced, the productive process can be more fully rationalized; that is, a more efficient allocation of resources and, therefore, lower costs, can be achieved. In brief, a diminution of uncertainty permits the use of a more specialized and, hence, more efficient, plant than would otherwise be the case.⁶

The process of collective bargaining may entail, in addition to assumed

wage increments, union concessions which *may* reduce employer uncertainty to a considerable degree. For example, no-strike or no-slowdown pledges or agreement to voluntary arbitration may have the effect of mitigating employer uncertainty. To the extent that the duration of collective bargaining agreements is lengthened, entrepreneurial foresight also may be improved. The very fact that an important factor price is rendered constant (or relatively so) may work toward reducing uncertainty at least in the short run. In brief, wage increases may be offset wholly or in part by other aspects of the collective bargaining agreement which, by reducing uncertainty, have a cost-diminishing effect through the medium of a more efficient plant.⁷ Wage increases under such circumstances may be accompanied by little or no unemployment.

(5) If the supply curve of labor is backward rising or "S" shaped, as some economists suggest, then *involuntary* unemployment resulting from wage increases may be very small or even nonexistent. By defining the maximization principle of unions as a function of both wage income *and* leisure,⁸ a negatively sloped or "S" shaped supply schedule may be appropriate. The net

⁵ Of course, minimum wage legislation — where effective — would entail similar conclusions. Nathan Belfer and Gordon F. Bloom, "Unionism and the Marginal Productivity Theory," *Insights Into Labor Issues*, R. A. Lester and Joseph Shister, eds. (New York: Macmillan Company, 1949), pp. 263-64, cite the interesting case wherein the producer of a standardized product raises wage rates to deter the organization of his labor force. In the fear of encouraging unionization by acting otherwise, he maintains output and employment at previous levels. The net result is higher wages with no loss of employment for the workers and exploitation of the entrepreneur.

⁶ See Melvin W. Reder, *Studies in the Theory of Welfare Economics* (New York: Columbia University Press, 1947), pp. 90-93.

⁷ Without a doubt collective bargaining — particularly if immature — entails uncertainties for the firm. Thus any diminution in uncertainty through the use of collective bargaining as a wage-increasing device will be a net gain. Uncertainty may well be greater with an unorganized labor force and the nonexistence of formalized collective bargaining.

⁸ See Lloyd Ulman, "Union Wage Policy and the Supply of Labor," *Quarterly Journal of Economics*, Vol. 65 (May, 1951), p. 237.

result is an "absorbent effect" on unemployment as wage rates rise, since a negative slope implies a *willing* substitution of leisure for hours of employment by union members as wages rise. There is reason to believe that the voluntary substitution of leisure for wage income may be of considerable significance in both high- and low-wage occupations.⁹

Disequilibrium Exceptions

(1) A series of disequilibrium — or better, unstable equilibrium — cases may exist in which the demand curve for labor may be *positively* sloped; that is, higher wage rates are associated with an *increased* volume of employment. In particular, three cases¹⁰ of varying likelihood merit attention. First, under imperfectly competitive conditions in the product market, increasing marginal physical productivity as more labor is hired coupled with declining (but positive) marginal revenue may result in a rising marginal revenue product schedule. This assumes that the increasing marginal physical product more than counterbalances the declining marginal revenue. Such a situation is most likely to occur during a period of recovery where at the outset the particular firm was producing at far less than capacity. Second, it is possible that the elasticity of a

given product demand curve may be increasing so rapidly that total revenue is increasing at an increasing rate, that is, the marginal revenue curve of the firm is positively sloped. Thus even with a diminishing marginal physical product, the product of marginal physical product and marginal revenue *may* increase as more labor is hired. The employer will now find it profitable to hire more workers even at higher wage rates. Furthermore, this case need not rest upon the presupposition of excess capacity. Third, it is possible — though admittedly not likely — that both marginal physical product and marginal revenue curves are positively sloped, that is, the individual firm is encountering increasing physical returns and a product demand having an elasticity such that total revenue is increasing at an increasing rate.

(2) Another unstable equilibrium case centers around the possibility of a peculiarly shaped product demand curve. Despite the near-universal tendency of economic theorists to deal in terms of a smooth, continuous product demand function, it is possible (indeed, likely) that certain pricing policies, e.g., "odd price" or "psychological price" policies,¹¹ might involve discontinuities in the marginal revenue schedule. This poses the possibility that an upward shift in costs stemming from wage rate increments within limits would entail no change in sales and employment. Similarly, the case wherein quality is (incorrectly) judged by price involves an upsloping product demand curve. Therefore, a wage in-

⁹ *Ibid.*, p. 250. As a matter of fact, if the demand schedule for labor were to cut a negatively sloped supply schedule for labor from above, then an increase in wage rates might actually result in a market disequilibrium in the form of a labor shortage rather than in involuntary unemployment.

¹⁰ See R. F. Mikesell, "The Possibility of a Positively Sloped Demand Curve for Labor," *American Economic Review*, Vol. 30 (December, 1940), pp. 829-32.

¹¹ See Edward R. Hawkins, "Price Policies and Theory," *Journal of Marketing*, Vol. 18 (January, 1954), pp. 234-36.

crease which entails an increase in product price could conceivably *increase* sales, employment, and possibly profits. The likelihood of these cases is limited by the prerequisite assumption that the firm was not in the profit-maximizing equilibrium position before the wage increase occurred.

(3) A third and obvious situation merits mention at this juncture because it emphasizes that a disequilibrium situation in the labor market need not be a fortuitous circumstance. It is well known that any union which can create a significant and persistent shortage of its particular type of labor service at going wage rates can boost wages without sacrificing current employment in its ranks.¹² The higher wage rates and concomitant drop in quantity demanded envisioned by economic theory will have the effect of reducing or eliminating the shortage rather than causing unemployment. Means for achieving such a shortage are well-known and manifold: prohibitive initiation fees, prolonged apprenticeship periods at unduly low wage rates, the flat refusal to issue more union membership cards, and so on. In short, the *prior creation* of a disequilibrium market situation by the union serves as a buffer which "absorbs" or offsets the unemployment effect of wage increases. It should be noted that this case differs in terms of causation from the previously discussed exploitation case.

¹² In a broader, long-run sense, such a practice causes or contributes to the persistence of unemployment, but not at the time the wage increment is achieved nor necessarily to the detriment of current union members.

Dynamic Exceptions

(1) A group of exceptional cases centers around the relaxation of one or more of the static assumptions upon which the law of labor demand rests. The first case is the commonplace one in which the demand for the product, and therefore the demand for labor, rise simultaneously with a wage increase so that any unemployment arising from the wage rate increment is cancelled out. As a result, employment may be unchanged or, conceivably, increased. The cause of the increase in the demand for labor might, for example, be an increase in product demand stemming from recovery, a shift in consumer tastes, or a rise in the price of substitute products. Imperfect competition is not a prerequisite. Even in a purely competitive industry, a union may lay claim to profits resulting from (say) innovation without sacrificing current employment.

It is important to note that a shift in demand may be exogenous or endogenous so far as the particular union is concerned. The union may pursue certain policies, such as political pressure aimed at the elimination of competing products or the sponsorship and/or initiation of advertising and promotional campaigns, which give rise to the enhancement of consumer demand and permit a wage boost unaccompanied by unemployment in the union's ranks. Favorable shifts in consumer demand concomitant with or prior to wage increases need not be coincidental.

It must be emphasized that in practice wage increases rarely occur from

the point of market equilibrium. Equilibrium at the outset is not likely to be the case if dynamic forces are at work. It is very possible, for example, that the formalization of wage rates via collective bargaining causes wages in the short run (during the life of the current bargaining agreement) to lag behind what they would otherwise be during the cyclical upswing. Thus, during recovery and prosperity wage increases may have the effect of "catching up"—in the sense of correcting a market disequilibrium—rather than "going ahead" of the economic milieu.¹³ Stated differently, the current wage rate in a particular market may result in a shortage of labor, thus permitting a higher wage rate without a drop in employment or, conceivably, with a concomitant increase in employment.

(2) It is generally agreed that productivity increases will tend to offset or more than counterbalance any employment-decreasing effects of wage increases. *Volume productivity* increases, those resulting from the more intensive use of a fixed plant, have already been

considered (p. 39). *Real productivity* increases stem from three major sources: (a) an increase in the efficiency of labor *per se*, (b) the use of a larger volume of capital equipment per worker, and (c) technological improvements—the enhancement of the quality of a given amount of capital.¹⁴

(a) The familiar "economy of high wages" theorem argues that higher wages improve the health, morale, and therefore efficiency of workers. In addition higher wages may entail reduced labor turnover and concomitant reductions in personnel and training costs. And unions have been known to sacrifice featherbedding practices in return for wage increases. Any or all of these factors may work toward offsetting the unemployment effects of higher wage rates.

(b) An increase in the amount of capital used relative to labor is likely to stem from an increase in the price of labor. This increase may be "labor induced" or "autonomous."¹⁵

It is almost universally agreed that a labor-induced increase in the use of capital relative to labor entails unemployment as an immediate result. It should be noted, however, that reabsorption may mitigate or in time eliminate the resulting unemployment. Yet

¹³ Milton Friedman, "Some Comments on the Significance of Labor Unions for Economic Policy," *Impact of the Union*, David McCord Wright, ed. (New York: Harcourt, Brace and Company, 1951), pp. 226-27; and Albert Rees, "The Economic Impact of Collective Bargaining in the Steel and Coal Industries During the Post-War Period," *Industrial Relations Research Association, Proceedings*, December, 1950, pp. 204-5. Note that the present case differs from the previously discussed case wherein unions, by pursuing certain policies, create an artificial shortage of labor by decreasing labor supply. The present case implies a favorable shift in demand divorced from union policy.

¹⁴ These definitions are modifications of those suggested by Julius Hirsch, "Productivity in Peace and War," *American Economic Review, Proceedings*, Vol. 37 (May, 1947), pp. 401-4.

¹⁵ "Labor induced" refers to a change in the labor/capital ratio prompted by union achievement of wage increases or the threat thereof. "Autonomous" changes in the labor/capital ratio are those divorced from union activity.

there is nothing automatic about such reabsorption.¹⁶

Autonomous increases in the ratio of capital to labor need not result in a decline in the volume of employment at all. Indeed, ensuing productivity increases coupled with the fact that in practice there is generally a direct relationship between the over-all level of economic activity and the rate of capital accumulation may negate any unemployment effects. In short, growth and prosperity factors can be expected to offset at least partially any potential unemployment effects of a decline in the labor/capital ratio.¹⁷

(c) Technological improvements may or may not be of a laborsaving nature. If not, then there is obviously the possibility that wage increments will not have any detrimental effect upon employment. Indeed, under favorable conditions¹⁸ technological improvements —

¹⁶ Nathan Belfer, "The Theory of the Automatic Reabsorption of Technologically Displaced Labor," *Southern Economic Journal*, Vol. 16 (July, 1949), pp. 35-43.

¹⁷ If the declining ratio is immediately and solely caused by an increase in the quantity of capital equipment, then the absolute volume of employment may well be enhanced ultimately. On the other hand, if the decline results from an increase in the quantity of capital equipment accompanied by a decline in the labor requirement, i.e., if the equipment is laborsaving, then the implication for the ultimate volume of employment depends upon the relative strength of the growth and prosperity factors.

¹⁸ In addition to an elastic product demand, such factors as the extent to which labor is "saved" by the technological improvement, the rate at which the innovation is introduced, the capacity and willingness of the technologically unemployed workers to be reabsorbed, and management's attitude toward sharing cost reductions with consumers via price reductions all play a role in determining the final employment effects.

even of a laborsaving nature — may have an employment-increasing effect, thus implicitly paving the way for wage increases via a sacrifice of *potential* increments in employment rather than the sacrifice of *current* employment.

Economists disagree as to whether or not union wage pressure and technological advance are causally related.¹⁹ If a causal link between wage increases and technological improvement does exist, unions, in effect, indirectly influence or control a significant managerial prerogative — the rate of innovation. Exercise of this influence may then permit the union to counteract or negate the deleterious implications (unemployment) associated with wage increments. By exerting wage pressure, unions may induce technological advances which permit the realization of these wage increments relatively independent of detrimental effects on current employment. This is not to say that such a relationship is common or of profound significance. But it cannot be ignored.

(3) The supply side of the labor market is the setting for a further dynamic exception. Wage rates and hours of employment are not distinct variables. In a sense, hours of employment constitute a variation of the wage issue; shorter hours (less employment) at fixed weekly or monthly

¹⁹ Compare J. R. Hicks, *The Theory of Wages* (London: Macmillan Company, 1932), pp. 120-21, and Sumner H. Slichter, *The Challenge of Industrial Relations* (Ithaca: Cornell University Press, 1947), pp. 89-91, with Gordon F. Bloom, "Union Wage Pressure and Technological Discovery," *American Economic Review*, Vol. 41 (September, 1951), pp. 603-17.

rates of pay are the equivalent of higher hourly wage rates. Hence, such an indirect wage increment, causing unemployment (in the sense of a smaller number of hours of employment available) which is equitably distributed among all employees, can hardly be termed an increase in involuntary or "undesirable" unemployment. This type of wage increment implies a change in worker tastes with respect to work and leisure and rests on the assumption that the union and the workers clearly foresee the consequences of this policy and voluntarily approve it. (See pp. 38-39.)

Institutional-Technological Exceptions

(1) Economic theorists tend to view a situation of fixed technical coefficients of production as an exceptional or limiting case; it is allegedly the rare situation wherein technology demands that the various factors be used in a stated proportion. This position may well have validity. On the other hand, there can be no doubt that in practice the substitutability of factors is sometimes closely circumscribed by technological considerations. "Modern [large-scale] production usually requires a very definite combination of labor and capital to perform a specific task."²⁰ This is particularly true in the short run. Hence, when production coefficients are fixed, wage rate increases may be achieved with little or no immediate drop in the level of employment stemming from a substitution of capital for labor.

²⁰ Nathan Belfer, "The Theory of the Automatic Reabsorption of Technologically Displaced Labor," *op. cit.*, p. 42.

(2) Apart from purely technological considerations, institutional arrangements formalized by custom or collective bargaining may have much the same effect as fixed technical coefficients. Hence, union-management agreements of a formal or informal nature regarding the ratio of labor to product or to capital contribute to the decline of any possibility of factor substitution. Make-work rules, featherbedding, seniority provisions, and legal restrictions may have basically the same effect as fixed production coefficients.²¹

The most obvious deterrents to decreasing employment in the face of wage rate increases are employment guarantees and similar institutional forces. Guaranteed annual wage agreements restrict for specified periods (the life of the current collective bargaining agreement) management's authority to vary the labor force. Hence, assuming a guaranteed annual wage contract of extensive coverage, it is unlikely that any wage increases *during* the life of the current collective bargaining agreement stemming, for example, from escalator clauses, longevity clauses, or the implicit or explicit option of the union to renegotiate wage rates upon sufficient notice will entail immediate employment effects adverse to the union.

Other techniques may have effects similar to those of employment guar-

²¹ Standard examples are the Railroad Brotherhoods and the Musicians. See Martin Bronfenbrenner, "Wages in Excess of Marginal Revenue Product," *Southern Economic Journal*, Vol. 16 (January, 1950), p. 303, and Belfer and Bloom, *op. cit.*, pp. 241-45, 249-50.

antees. Severance pay, for example, may work against layoffs as wage rates rise; from the entrepreneur's standpoint, the higher wage costs may be a better alternative than the immediate cost of dismissal pay.²² Experience or merit rating in conjunction with employer contributions to the unemployment compensation program may also lessen the willingness of employers to cut their labor force when wage rates increase. Finally, restrictive work rules flatly limit the employer's discretion in determining the exact size of his work force.

In a broader sense, increased union participation in management results in the virtual disappearance of employment declines as a strategic factor in inhibiting unions in their quest for higher wage rates; the barrier of marginal revenue productivity becomes irrelevant so far as its implications for wage setting and employment determination are concerned. The entity which the employer attempts to maximize must now be viewed as "some increasing function of profits, wages, employment and industrial peace."²³ Institutional forces now command a more strategic position than economic variables in the determination of wage rates and employment.

(3) The preceding discussion — indeed, this entire analysis of exceptions to the law of labor demand — raises the larger question as to whether or not

collective bargaining by strong unions renders the law of labor demand sterile and obsolete. Have political, sociological, psychological, and other noneconomic forces relegated the economic factors embodied in the law of labor demand to a position of minor significance in labor markets?

Stressing the dangers of abstraction and the fundamental significance of the institutional aspects of labor markets, leading institutional economists²⁴ have made a strong case for abandonment of the law of labor demand. The major tenet of this position is the contention that the cause-effect chain between wages and the volume of employment is loose, indirect, and therefore nebulous. As the institutionalists see it, there are four distinct links in the chain of relationships which relate wage rates to the demand for labor: (a) wage rate to labor cost, (b) labor cost to total cost, (c) total cost to price, and (d) price to sales and, therefore, employment. It is asserted that the high degree of "free play" at each of these four links makes wage rates and employment basically independent variables: "... the employment effect of a wage adjustment is unpredictable before the fact and undecipherable after the fact. . . ."²⁵ The conclusions are that the law of labor demand is undermined as a description of the wage rate-employment relationship and is incorrect as a point of reference for ex-

²² Belfer and Bloom, *op. cit.*, p. 253, have reached the conclusion that "a dismissal wage may result in a short-run increase in employment opportunities."

²³ Bronfenbrenner, "Wages in Excess of Marginal Revenue Product," *op. cit.*, pp. 305-6.

²⁴ See Arthur M. Ross, *Trade Union Wage Policy* (Berkeley: University of California Press, 1948); and Clark Kerr, "Economic Analysis and the Study of Industrial Relations," University of California, *Reprint No. 3* (1948).

²⁵ Ross, *op. cit.*, pp. 19, 80-93.

plaining and predicting union behavior. Indeed, the facts generally indicate that the law of labor demand is not sufficiently correct to cause unions to forgo opportunities for wage increases for fear of resulting unemployment. It is not to be denied that the institutionalists' case is well conceived, impressive in its comprehensiveness, and generally of considerable merit.

The contrasting avenue of more orthodox economic thought leads to the retention of the law of labor demand as a relatively weak, exception-laden generalization. Justification for this stand centers upon two basic contentions. (a) All economic laws are tentative statements, subject to modifications and exceptions. Certain of the exceptions to the law of labor demand are of an unlikely nature—true exceptions are not abundant. And accurate applications, attesting to the predictive powers of the law, are fairly numerous.²⁶ (b) Despite the shortcoming of the law of labor demand, there is no superior generalization at hand. The institutionalist critique, it is argued, is not as constructive as it first seems; it is ultimately concerned with abandoning the law, not (as yet) in modifying it or replacing it with a positive principle or approach tested and proven to be superior. Also there is serious doubt as to whether the institutional approach to the labor market is inherently capable of giving birth to a definite generalization concerning the wage-employment relationship which is worthy

of use as a predictive technique. In any event, the only current alternative to the law of labor demand seems to be the exhortation to examine individual cases largely on an after-the-fact basis.

Of course, the first defense begs the question as to when exceptions to a law become so great in number and significance that no law becomes preferable to an inaccurate one. And the second defense obviously does nothing to explain away the defects of the law of labor demand, but rather is tantamount to saying "show me something better."

What is to be the future of this tenuous generalization? The best guess is that the majority of labor economists will—with tongue in cheek and considerable reluctance—continue to pay homage to the law of labor demand for some time. The oft-quoted quip that "It takes a theory to kill a theory; facts can only dent the theorist's hide"²⁷ is most relevant in justifying this prediction. Needless to say, knowledge of the law's many shortcomings demands extreme prudence in its use as a predictive device.

Summary

The law of labor demand is subject to numerous exceptions. Fundamentally, these exceptions stem from (1) the existence of certain specific conditions or extenuating circumstances in the product and/or factor markets, (2) unstable equilibrium or disequilibrium situations existing in either the relevant labor or factor market, (3) circum-

²⁶ See George P. Shultz and Charles A. Myers, "Union Wage Decisions and Employment," *American Economic Review*, Vol. 40 (June, 1950), pp. 362-80.

²⁷ Paul A. Samuelson, "Economic Theory and Wages," *Impact of the Union*, David McCord Wright, ed. (New York: Harcourt, Brace and Company, 1951), p. 323.

stances which violate the implicit *ceteris paribus* assumption of the law, and (4) the functioning of institutional arrangements and technological considerations in such a manner as to ameliorate or completely negate the operation of the law. These exceptional cases may apply singly or simultaneously in loosening the wage-employment rela-

tionship embodied in a strict statement of the law. Labor economists must choose between the appealing but immature multi-disciplinary approach of the institutionalists and the retention of a generalization of severely restricted accuracy and applicability. Regardless of one's leanings, the choice is not a happy one.

Postwar Railroad Rate Increases on Livestock and Products

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RAILROAD FREIGHT RATES play an important part in the location of meat-packing plants since the freight rates on each commodity to a great extent determine whether livestock will be shipped on the hoof or as dressed meat. The relationship of rates between these commodities is often of more significance to shippers than the absolute level of rates on each item. Packers located near consumer markets seek a high ratio of rates on dressed meats to those on livestock, whereas those located near the sources of livestock supply seek to obtain a low ratio.

This article examines the railroad rate increases between the years 1946 and 1956 on the movement of livestock and dressed meats from 16 selected midwestern origins to three common destinations. It seeks to analyze briefly the effects of these rate advances on the rate relationships for each origin and to compare changes in origin relationships on shipments to common markets during the 10-year period.

Postwar Rate Increases

Faced with the pressure of rising equipment and materials prices and labor costs, the railroads initiated the first of a series of postwar rate increases in April, 1946. The latest increase included in this analysis was

effective March 6, 1956.¹ Table 1 shows the increases authorized between these dates. The percentages in the table are averages and assume that intrastate rates would be increased in the same pattern as those authorized on interstate traffic.

In the past 10 years, whereas the general level of rates increased an average of 88.8 percent, live animals and products took an estimated increase of 94.1 percent. Livestock rates were raised by 86.1 percent, and those on meats and edible packinghouse products were increased by 97.8 percent.² As compared with other commodity classifications, the increases on dressed meats were exceeded only by those on manufactured items. Livestock rate increases, although smaller, advanced

¹ On December 17, 1956, the railroads received a 5 percent increase on livestock and dressed meat movements, but the advance is not included in rates used in this article.

² Dressed meat usually moves under one of two classifications. Fresh meats include fresh meats, salted; fresh hog stomach linings; fresh leaf lard (not rendered); fresh sausage; and fresh meat NOIBN (not otherwise indexed by name). Packinghouse products include a long list of items such as sausage casings; grease, lard, and lard compounds; cooked, cured, or preserved meats; and sausage and tallow. These descriptions are not uniform in all tariffs. Not included in the packinghouse list are canned meats, fertilizer, hides, pelts, and other commodities shipped from packinghouses.

Table 1. Postwar Nationwide Railroad Freight Rate Increases Authorized

ICC docket number	Effective date	Percent increase over	
		Rates in effect June 30, 1946, cumulated	Rates in effect immediately prior to increase shown
Ex Parte No. 162.....	Jan. 1, 1947	17.6	17.6
Ex Parte No. 166.....	Oct. 13, 1947	28.1	8.9
Ex Parte No. 166.....	Jan. 5, 1948	37.8	7.6
Ex Parte No. 166.....	May 6, 1948	42.8	3.6
Ex Parte No. 166.....	Aug. 21, 1948	44.2	1.0
Ex Parte No. 168.....	Jan. 11, 1949	51.7	5.2
Ex Parte No. 168.....	Sept. 1, 1949	57.3	3.7
Ex Parte No. 175.....	Apr. 4, 1951	61.1	2.4
Ex Parte No. 175.....	Aug. 28, 1951	67.6	4.0
Ex Parte No. 175.....	May 2, 1952	78.9	6.0
Ex Parte No. 196.....	March 6, 1956	88.8	5.5

Sources: 66th Annual Report of the Interstate Commerce Commission, Washington, D. C., November 1, 1952, p. 48. Interstate Commerce Commission, Bureau of Transport Economics and Statistics, *Monthly Comment on Transportation Statistics*, March, 1956, p. 3.

by a higher percentage than rates on products of mines and agriculture (i.e. grains, and fruits and vegetables).

In numerous cases,³ midwestern packers and public stockyard interests urged that rates on the products not be increased by a greater percentage than those on livestock. Further, they were joined by Federal and state agricultural agencies in proposing that livestock and fresh meat shipments be excepted from the technique of increasing rates by applying different per-

centages in different sections of the nation.⁴ Other objections concerned the wisdom of using the percentage method of increasing rates on livestock and products. Opposing parties contended that these commodities should be given the same consideration as other agricultural products, particularly fruits and vegetables.

On the latter commodities (i.e., fruits and vegetables) rates were increased

³ Interstate Commerce Commission, Bureau of Transport Economics and Statistics, *Transport Economics*, Washington, D. C., March, April, 1956. *Increased Railway Rates, Fares and Charges*, 1942, 248 I.C.C. 545; 255 I.C.C. 375; 256 I.C.C. 502; 258 I.C.C. 455; 259 I.C.C. 159. *Increased Railway Rates, Fares and Charges*, 1946, 266 I.C.C. 537. *Increased Freight Rates*, 1947, 269 I.C.C. 33; 270 I.C.C. 81. *Increased Freight Rates*, 1948, 372 I.C.C. 695; 276 I.C.C. 13; 272 I.C.C. 695. *Increased Freight Rates*, 1951, 280 I.C.C. 179; 281 I.C.C. 577; 284 I.C.C. 589. *Traffic World*, November 26, 1955, and March 10, 1956.

⁴ Livestock and fresh meat moves from midwestern origins to eastern destinations on combinations of rates which may break at Chicago. For example, a shipment of fresh meat from Omaha to New York would move on a rate from Omaha to Chicago plus a rate from Chicago to New York, and would be known as a combination of two-factor rates on the through haul. On the other hand, packinghouse products would be shipped on one through rate for the same movement. In the 1946 case, a single percentage increase applied on the combination rates for the entire distance involved. Later cases resulted in separate and sometimes different increases on each factor of the combination rate.

by percentages with a maximum ceiling or "hold down" expressed in cents per 100 pounds. In other words, if the percentage increase resulted in a rate higher than the maximum prescribed, the ceiling would apply. Midwestern interests have had no success in proposals to adopt "hold downs" for livestock and fresh meat rate advances.⁵

Changes in Rate Relationships

Decisions to ship live animals or their products are made primarily on the basis of rate relationships existing between the commodities at any given time. The relationships were of concern to shippers and carriers even before Federal regulation was enacted in 1887. As early as 1884, rates on the Chicago-New York haul were adjusted so that dressed meat rates were 75 percent higher than those on cattle. Ten years later, the Interstate Commerce Commission recognized that competition between the transportation

of livestock and meat made the relationship subject to Section 3 of the Interstate Commerce Act which forbade undue preference and prejudice. It stated:

In contemplation of the Act, as we interpret it, these competitive articles (live animals and products) are to be treated as one subject by the carriers in providing for their transportation.⁶

In 1911 and again in 1915, the Commission called for the establishment of a definite relationship based upon transportation considerations, but in the absence of sufficient evidence, felt unprepared to fix it.⁷ Since these decisions, cases have dealt exclusively with adjustments in the rates on livestock or products but not on both. Hope of fixing definite relationships was abandoned in the *Eastern Livestock Cases of 1926*.⁸

Throughout the years 1915 to 1938, the fresh meat-livestock relationship was approximately 150 percent, and the packinghouse products-livestock relationship about 101 percent on the Chicago-New York movement. Over this period and to the beginning of World War II, the relationships appear to have followed a ratio of 3-2-2 between rates on fresh meats, packinghouse products, and livestock on this

⁵ In providing rate level advances, different methods are authorized by the Commission in the expectation that commercial competition between producers and markets will be maintained on as fair and equitable a basis as possible. Foremost, because of its easy initial application, is the process of increasing the basic rate between two points by a horizontal percentage, which has the effect of handicapping the distant producer as compared with the nearby producer of similar commodities shipped to a common market. As the percentage expands over a period of years, the producer located farthest from a market must either absorb the rising transportation cost or use other less expensive transportation agencies. A second method involves application of a percentage increase with stated maxima in cents per 100 pounds which in practice places a ceiling on the rate advances. The third technique applies the increase in cents per 100 pounds without regard to distance.

⁶ *John P. Squire & Co. v. Michigan Central Railroad*, 4 I.C.C. 611, 628.

⁷ *T. M. Sinclair & Co., Ltd. v. C. M. & St. Paul Railway Co.*, 26 I.C.C. 490; 36 I.C.C. 675.

⁸ 144 I.C.C. 731. To study further the reasoning of the Commission on the rate relationship, see also *Morrell and Company v. N.Y.C. RR. Co.*, 104 I.C.C. 104; *Westbound Case*, 210 I.C.C. 13; *George A. Hormel & Co. v. Atchison, Topeka and Santa Fe Railroad Co.*, 262 I.C.C. 9.

Table 2. Relationship between Rates^a on Livestock and Meats
Moving from Chicago to New York, 1915-56

Date of decision	Relationships in percentages		
	Fresh meat/ livestock	Packinghouse products/ livestock	Fresh meat/ packinghouse products
January 3, 1916.....	143.9	95.5	150.8
June 25, 1918.....	153.3	100.0	153.3
August 26, 1920.....	153.2	100.0	153.2
July 1, 1922.....	154.0	100.0	154.0
September 1, 1926.....	139.8	100.0	139.8
November 1, 1928.....	156.4	111.9	139.8
November 1, 1930.....	156.4	105.0	149.1
December 3, 1931.....	149.1	100.0	149.1
March 28, 1938.....	148.2	101.8	145.6
January 1, 1947.....	155.8	105.4	147.0
May 6, 1948.....	156.6	106.0	147.7
September 1, 1949.....	157.1	106.6	147.4
May 2, 1952.....	156.2	106.6	146.4
March 2, 1956.....	156.4	107.3	145.8

^a Rates are exclusive of the 3 percent Federal transportation tax.

Sources: 1916 through 1938 — James C. Pettee, *Rail Rates on Livestock and Meats* (Washington: Bureau of Agricultural Economics, June, 1943). 1946 through 1956 — 266 I.C.C. 537; 269 I.C.C. 33; 270 I.C.C. 81-93; 276 I.C.C. 9; 280 I.C.C. 179; 281 I.C.C. 606; 284 I.C.C. 589; *Traffic World*, November 16, 1955, and March 10, 1956.

key haul, as shown in Table 2. The following analysis will show the effects of the postwar rate increases on these relationships.

For purposes of examining the relationship of rates between animals and products, a representative selection of origin points throughout the Midwest is used. Six of these are in Iowa; two each in Wisconsin, Minnesota, and Missouri; and one each in Kansas, Nebraska, North Dakota, and Illinois. The destination territory is represented by three key cities. In the East, New York has been chosen. Chicago has been selected in the Midwest and Los Angeles on the Pacific coast. All origins and destinations are cities in which Federally inspected plants are located.

In the tables, the ratios of rates on fresh meats and on packinghouse

products to the rates on livestock are each expressed as percentages of livestock rates. The ratios between the rates on the two classes of meats are expressed as percentages of rates on packinghouse products.

Rates to New York City

Percentage relationships among the rates to New York City from each origin in 1946 and in 1956 are shown in Table 3. The prewar relationships on Chicago-New York traffic underwent moderate change as a result of the postwar rate proceedings. Fresh meat rates in 1946 were approximately 48 percent higher than rates on livestock. By 1956, the percentage had risen to 56. The packinghouse products-livestock ratio rose from 102 percent in 1946 to 107 percent in 1956.

Table 3. Percentage Relationships Among the Carload Rates on Livestock, Fresh Meat, and Packinghouse Products from Selected Origins to New York City, June 30, 1946, and June 1, 1956

Origin	Fresh meat/ livestock		Packinghouse products/ livestock		Fresh meat/ packinghouse products	
	1946	1956	1946	1956	1946	1956
Chicago.....	148	156	102	107	146	146
Madison.....	121	126	82	85	147	148
St. Louis.....	149	155	103	108	144	144
Davenport.....	147	154	103	107	142	144
Eau Claire.....	127	127	91	91	141	140
Cedar Rapids.....	129	135	91	91	142	147
Ottumwa.....	134	139	95	95	142	146
Waterloo.....	133	138	96	96	138	143
Austin.....	132	138	96	97	137	142
St. Paul.....	133	138	96	96	138	143
Des Moines.....	132	138	96	97	137	142
Kansas City.....	143	148	99	99	144	149
Omaha.....	136	141	99	100	138	141
Sioux City.....	132	137	97	98	136	140
West Fargo.....	142	144	101	101	141	143
Wichita.....	136	141	106	109	127	129

The products ratio showed no change.

During the 10-year period, the ratio of rates on fresh meats to rates on livestock from origins between the Mississippi and Missouri Rivers showed increases of 5 or 6 percentage points. Little or no change occurred in the packinghouse products-livestock ratio. With the exception of Chicago, St. Louis, and Davenport, the level of packinghouse product rates in both 1946 and 1956 remained under the level of livestock rates until a distance of about 1,400 miles from New York City was reached. Beyond that distance, the relationship in 1956 between the levels tended to become more uniform than that in 1946. The products ratio showed little change for origins east of the Mississippi River. The greatest changes occurred at points located between the rivers.

Rates to Los Angeles

Rate relationships between the three commodities on movements to Los Angeles are shown in Table 4. Extensive use is made of origin groupings in the fresh meat and packinghouse products structures, whereas livestock rates conform very closely to distance scales.⁹

From midwestern origins to the western destination the relationships of rates on products to rates on livestock result in ratios generally higher than

⁹ Point-to-point rates from the Midwest to Mountain-Pacific destinations were in part specifically prescribed in the *Hormel* case, 263 I.C.C. 9. The remainder resulted from modified findings in the *Armour and Company* case, 272 I.C.C. 659; 281 I.C.C. 385. In the latter proceeding, the carriers were permitted to depart from strict application of the prescribed mileage scale on fresh meats and packinghouse products to the extent required to permit origin groupings suggested by the carriers and shippers.

Table 4. Percentage Relationships Among the Carload Rates on Livestock, Fresh Meat, and Packinghouse Products from Selected Origins to Los Angeles, June 30, 1946, and June 1, 1956

Origin	Fresh meat/ livestock		Packinghouse products/ livestock		Fresh meat/ packinghouse products	
	1946	1956	1946	1956	1946	1956
Chicago.....	142	147	118	123	120	120
Madison.....	140	147	117	123	120	120
Eau Claire.....	137	142	114	119	120	120
Austin.....	143	150	119	126	120	120
St. Louis.....	146	152	122	127	120	120
Davenport.....	144	150	120	126	120	120
Cedar Rapids.....	146	153	121	128	120	120
Ottumwa.....	149	156	125	131	120	120
Waterloo.....	146	153	121	128	120	120
Des Moines.....	151	158	126	132	120	120
St. Paul.....	138	145	115	121	120	120
Kansas City.....	147	152	122	127	120	120
Omaha.....	151	158	126	132	120	120
Sioux City.....	158	166	132	138	120	120
West Fargo.....	136	142	113	119	120	120
Wichita.....	158	165	132	139	120	119

those from the same points to New York City. On the Los Angeles movement each set of ratios shows similar tendencies in the year 1946 and 1956. As the distance from origin to destination decreases, the ratios generally increase, whereas the ratios on New York shipments showed a movement in the opposite direction. However, the rate of increase in the relationships over the period is fairly uniform from all origins.

An examination of the ratios between the products on Los Angeles traffic suggests the following differences: First, the ratios in both years are substantially below those on the New York movements. Second, because of the widespread use of origin groupings, little or no change in the ratios has followed from the rate advances. Third, the ratios are substantially the

same from most origins which means that almost perfect uniformity between the rates on products exists. Whereas fresh meat-livestock relationships and packinghouse products-livestock relationships on the western movement were higher than those to New York City, the ratios of rates between the products were materially lower on the westbound traffic.

Rates to Chicago

Table 5 illustrates the ratios among the rates to Chicago. In contrast to the relationship to other eastern destinations, livestock rates to Chicago from origins on or east of the Missouri River were generally higher than rates on fresh meats and packinghouse products. Rates on the products overtake and exceed the livestock rates from origins west of the Missouri River. This fact

Table 5. Percentage Relationships Among the Carload Rates on Livestock, Fresh Meat, and Packinghouse Products from Selected Origins to Chicago, June 30, 1946, and June 1, 1956

Origin	Fresh meat/ livestock		Packinghouse products/ livestock		Fresh meat/ packinghouse products	
	1946	1956	1946	1956	1946	1956
Madison.....	100	109	100	107	100	100
Davenport.....	84	86	76	80	109	107
Cedar Rapids.....	84	85	84	85	100	100
Waterloo.....	86	90	86	90	100	100
Ottumwa.....	79	81	79	81	100	100
St. Louis.....	102	109	84	88	120	124
Eau Claire.....	80	86	77	82	104	105
Austin.....	77	84	79	85	111	111
Des Moines.....	81	87	81	87	100	100
St. Paul.....	80	85	73	77	111	111
Kansas City.....	95	100	95	100	100	100
Omaha.....	95	100	95	100	100	100
Sioux City.....	93	99	93	99	100	100
West Fargo.....	118	122	103	106	115	115
Wichita.....	121	124	105	107	115	115

affords an example of the relatively low level of the fresh meat and packinghouse product rates, or the high level of livestock rates, on shipments originating east of the Missouri River and of the relatively high rate of progression in the meat rate scale as distance increases west of the river. More examples of perfect equality in rates on fresh meats and packinghouse products are found on traffic to Chicago than those on the movement to more distant eastern destinations.

Evaluation of Changes

Variations in the ratios of product rates to livestock rates on movements to the eastern and western markets arise from differences both in the level and in the structure of the rates. Generally, in both directions the level of rates on fresh meats is higher than that on livestock, whereas the level of the

rates on packinghouse products are more nearly equal to those on livestock on eastbound shipments, but higher on westbound movements. Undoubtedly one of the reasons for this situation has been the numerous adjustments in the rate structures authorized by the Commission over the past fifty years, caused primarily by the intensely competitive nature of the livestock and meat-packing industry and carrier competition for the business. As a result of the innumerable proceedings, distortions have been permitted to arise in the rate levels and rate structures.

Distortions in level and structure may also arise from the application of uniform percentage rate increases. When rates are increased percentagewise, an already distorted rate structure suffers further deformation. The livestock and meat-packing industry produces a large part of its total volume at points lo-

cated some distance from consuming markets, and tends to adjust inbound and outbound traffic to the rate structure developed over a period of time. Decisions to ship animals on the hoof or in the form of products in many instances turns on the relationship of the rates on each commodity.

Thus far, this analysis has assumed that the maximum freight rates authorized in the postwar decisions have been charged by the carriers. If the assumption is correct, the 1946 rate relationships would have been rearranged by the percentage increases. For example, the fresh meat-livestock ratio on the Chicago-New York haul would increase by 8 percentage points (Table 3). From points in Iowa to Los Angeles, fresh meats would take rates 6 or 7 percentage points above those of livestock in 1956, as compared with the relationships of 1946 (Table 4). Similar examples may be found in all of the movements used in this report. With the exception of Iowa interior points, the packinghouse products-livestock ratios would show similar changes. From all origins to the western points, both fresh meat and packinghouse product rates would rise relative to rates on livestock.

On the basis of the assumption above, it appeared to be relatively less expensive in 1956 to ship livestock than to ship the products from midwestern points to eastern and far western destinations. Midwestern packers therefore seem to have suffered a disadvantage in competing with those located on the coasts. On the other hand, rate adjustments made to meet carrier, producer, or marketing competition on specific

hauls or portions of hauls during the postwar period could mean that the apparent competitive advantage held by long-haul livestock shippers has disappeared. If changes in the relationships of rates between the commodities had been uniform for all origins, a relatively stable competitive position would have been maintained for origin producers, and the need for future specific rate adjustments probably would be reduced. Some evidence of this characteristic is found on the westbound movement, but the wide range of differences in the relationships on the eastbound traffic affords examples of rate structure irregularities further distorted by application of percentage rate level advances.

Distortion also occurs when territorial percentage increases are applied to each factor of a combination rate. Rates on livestock and fresh meat from origins west of the Mississippi River to destinations east of the Illinois-Indiana state line were adjusted during the postwar period in this manner. However, on packinghouse product movements over similar hauls, rates were increased by applying the interterritorial percentages on the basic one-factor through rates. The application of intra-territorial percentages to the separate factors of livestock and fresh meat combination rates at the same time that interterritorial increases were applied to basic one-factor through rates for packinghouse products produced a significant adjustment in the relationships of rates between the commodities.

The distortion shows particularly in the packinghouse products-livestock ratios, and in the ratios between the rates

on the products. If one-factor through rates on the west-east movements of livestock and fresh meats were published and used as a base upon which interterritorial rate advances could be applied, the present irregularities in each structure would tend to smooth out. Where desirable, the relationships between these commodities and between these commodities and packing-house products would be made, at least to some extent, more stable and uniform.

Origin Relationships

Except for relatively minor adjustments in the late thirties, the rate structures for livestock and products remained fairly stable between the years 1931 and 1946. On eastern movements competitive spreads in rates from origins between the Missouri River and Chicago as well as those in western trunk-line territory continued to exist until 1946, thereby preserving the balance between the western and eastern rate structures prescribed in the *Morrell* case. Over the 15-year period, a competitive pattern was established on the strength of the rate structures in existence. However, following the postwar rate level proceedings, this competitive balance may have been altered. Examples taken from the data in Table 6 will serve to illustrate competitive arrangements in the years 1946 and 1956.

Table 6 has been constructed to show the cost of transporting a 240-pound hog from selected origins to New York City as compared with the cost of transporting the products if the hog were slaughtered and the dressed meat shipped to the same destination. Chi-

cago is considered as the competitive origin. Table 7 presents similar data for the westward movement to Los Angeles, with Denver selected as the competitive point. Each destination was chosen because of its location in the center of the major consuming markets on the east and west coasts. Column 1 in each table gives the total cost of shipping a 240-pound hog from each origin and the cost of moving the dressed products to New York City and to Los Angeles in 1946. Column 4 shows the total shipping costs in each direction in 1956. The spread in cents per 100 pounds over Chicago and Denver is found in columns 2 and 5. Columns 3 and 6 show the additional costs as percentages. For example, in 1946, a shipper from Madison paid 31 percent more for moving a live animal to New York City than if it were shipped from Chicago and 5 percent more for the movement of dressed products. In 1956, the competitive disadvantage of Madison increased to 33 percent on live animal movements and to 6 percent on the shipment of dressed products.¹⁰

An examination of the eastbound competitive relationships in Table 6 reveals a considerable increase in the spreads in cents per 100 pounds from each origin point, 1956 over 1946. The more distant origins took the greater increases, whereas smaller increases were taken at origins closer to markets. This tendency is a natural result of percentage rate advances, and may be illustrated by comparing St. Paul with

¹⁰ The dressed products illustration assumes no by-products movement from the slaughtering point.

Table 6. Spread over Chicago in Costs of Shipping a 240 Pound Hog and Products^a
from Selected Origins to New York City, 1946 and 1956
(Total costs in cents per 100 pounds)

Origin	1946						1956					
	Shipping costs (1)		Spread in cents (2)		Percent disadvantage (3)		Shipping costs (4)		Spread in cents (5)		Percent disadvantage (6)	
	Live animal	Dressed products	Live animal	Dressed products	Live animal	Dressed products	Live animal	Dressed products	Live animal	Dressed products	Live animal	Dressed products
Chicago.....	134	99	..	..	..	204	264	204	..	..	..	..
Madison.....	175	104	41	5	5	216	350	216	86	12	33	6
St. Louis.....	146	109	12	10	10	225	290	225	26	21	10	10
Davenport.....	149	110	15	11	11	225	293	225	29	21	11	10
Eau Claire.....	202	130	68	31	31	255	396	255	132	51	50	25
Cedar Rapids.....	182	118	48	19	19	238	360	238	96	34	36	17
Ottumwa.....	182	123	48	24	36	248	360	248	96	44	36	22
Waterloo.....	185	125	51	26	38	251	365	251	101	47	38	23
Austin.....	194	132	60	33	45	265	384	265	120	61	45	30
Des Moines.....	194	132	60	33	45	265	384	265	120	61	45	30
St. Paul.....	201	137	67	38	50	275	398	275	134	71	51	35
Kansas City.....	204	145	70	46	52	290	401	290	137	86	52	42
Omaha.....	214	149	80	50	60	299	420	299	156	95	59	47
Sioux City.....	221	150	87	51	65	300	432	300	168	96	64	47
West Fargo.....	238	171	104	72	73	340	473	340	209	136	79	67
Wichita.....	230	167	96	68	72	332	444	332	180	128	68	63

^a Products consist of 50 pounds of fresh meat and 100 pounds of packinghouse products. Weight yields were furnished by one of the major meat packers.

Table 7. Spread over Denver in Costs of Shipping a 240 Pound Hog and Products^a
from Selected Origins to Los Angeles, 1946 and 1956
(Total costs in cents per 100 pounds)

Origin	1946						1956					
	Shipping costs		Spread in cents		Percent disadvantage		Shipping costs		Spread in cents		Percent disadvantage	
	Live animal	Dressed products	Live animal	Dressed products	Live animal	Dressed products	Live animal	Dressed products	Live animal	Dressed products	Live animal	Dressed products
Denver.....	199	186	..	..	..	..	355	347	..	..	..	..
Wichita.....	223	197	24	11	12	6	401	370	46	23	13	7
West Fargo.....	288	218	89	32	45	17	518	410	163	63	46	18
Sioux City.....	247	218	48	32	24	17	444	410	89	63	25	18
Omaha.....	247	208	48	22	24	12	444	390	89	43	25	12
Kansas City.....	247	202	48	16	24	9	444	376	89	29	25	8
St. Paul.....	283	218	84	32	42	17	509	410	154	63	43	18
Des Moines.....	259	218	60	32	30	17	480	422	125	75	35	22
Waterloo.....	269	218	70	32	35	17	497	422	142	75	40	22
Ottumwa.....	262	218	63	32	32	17	485	422	130	75	37	22
Cedar Rapids.....	269	218	70	32	35	17	497	422	142	75	40	22
Davenport.....	271	218	70	32	36	17	504	422	149	75	42	22
St. Louis.....	269	219	70	33	35	18	485	411	130	64	37	18
Austin.....	274	218	75	32	38	17	504	422	149	75	42	22
Eau Claire.....	293	223	94	37	47	20	542	430	187	83	53	24
Madison.....	286	223	87	37	44	20	526	430	171	83	48	24
Chicago.....	283	223	84	37	42	20	538	440	183	93	52	27

^a Products consist of 50 pounds of fresh meat and 100 pounds of packinghouse products. Weight yields were furnished by one of the major meat packers.

Omaha. In 1946, the live animal spread between St. Paul and Chicago was 67 cents; in 1956, \$1.34. Omaha, in 1946, had an 80 cent spread over Chicago; and by 1956, the spread increased to \$1.56. The St. Paul rate advanced 100 percent as against a 95 percent increase at Omaha.

Comparison of competitive relationships between the listed origins and Chicago on shipments to New York City seem to indicate lack of a definite trend when the effect of the rate decisions on each origin was studied. On the basis of the points used, the commercial disadvantage did not rise for all origins nor rise or fall uniformly on each commodity. Rather the rate decisions appear to have had a mixed effect; in some cases there seems to have been a further increase over the period in the competitive disadvantage on both commodities, and in other cases some origins found themselves in a better competitive position in 1956 than in 1946 on shipments of one or both items.¹¹

The westbound competitive relationships may be summarized from the data of Table 7. Much more definite and uniform rate relationship changes were

present as compared with the changes for the eastern movements. In almost every instance, the origins were at a greater disadvantage relative to Denver in 1956 than in 1946 on shipments to Los Angeles. There were no examples of a reduction in the competitive disadvantage in either livestock or products during the period. The grouping feature of the westbound fresh meat and packinghouse products rate structure becomes very noticeable for Iowa and Wisconsin origins as the 1946 dressed products competitive relationship with Denver equalized at a higher level in 1956. It appears that the impact of the rate advances has been uniformly greater on each of the origins competing with Denver on traffic to Los Angeles than on points competing with Chicago on shipments to New York City.¹²

Summary

This article has not attempted to answer the question of whether uniform relationships would be desirable from an economic or social point of view. It has, to a limited extent, presented some of the effects of the postwar railroad rate increases upon the relationships on eastern and western movements of the traffic. Despite the fact that the Interstate Commerce Commission has declined to fix relationships in the rates of the three commodity classes, a fairly definite ratio has emerged over the years.

¹¹ It is quite possible that different results might have been obtained through the use of other origins as base points for comparison of competitive relationships. Midwestern packers, in opposing the rate level increases, stressed the increased spreads in cents from one point over another on shipments into common markets, alleging disruption of the pre-1946 rate relationships and commercial relationships through application of the postwar percentage rate increases. They contended that it was not the level of the rates, but rather the amount of competitive spread between origins that destroyed their business.

¹² For a discussion of the influence of transportation charges on hog prices in different markets, see *Price Differentials for Slaughter Hogs*, Bulletin P. 93, Agricultural Experiment Station, Iowa State College, Ames, Iowa, August, 1948.

Controversy over the relationship between livestock and dressed meat rates may be expected to continue, for any change affects the prosperity of the various packing centers and has an influence upon their locations. The struggle between the Atlantic coast packers and those in the Midwest has been particularly violent, since a relatively small change in the rate relationships appears to have a large effect upon the activities of the east coast packers. The controversy could expand to the west-bound movements if an increase in meat-packing activity occurs on the west coast.

Interests who argue for uniformity in the form of constant rate differentials between the commodities do so in defense of stability in producer and marketing arrangements. However, before an opinion can be expressed pro or con on this matter, a further question must be answered — namely, whether or not it is more desirable economically to slaughter the livestock in the surplus producing areas or move the animals to deficit regions for conversion into meat products. The answer could provide information, lacking at present, to guide regulatory bodies in their deliberations on this problem. But even assuming the desirability of uniform rate relationships which reflect constancy in specific rate differentials as a goal, uniformity over a period of time could not be maintained through application of the percentage technique as a method of increasing rates. It should be remembered that uniform rate relationships do not mean equality of rates on livestock and products.

If uniformity were considered an

economic goal, a tremendous task of developing one rate structure for the commodities would face the Commission. One of three bases used at present in rate construction would probably have to be chosen as a standard for movements within a particular geographical region. The choice would lie between the livestock rate scales, the key point basis of the fresh meat rate structure, or the class rate scales of packinghouse products.¹³ In each instance, however, the modification of the rate structure or the combination of all three into a single rate scale to govern the movement of the commodities into deficit areas would present difficult technical problems not only with respect to the transportation factors involved but also in the realignment of origin-destination relationships.

One more comment seems appropriate. In the general rate level cases, three sets of circumstances usually are evaluated by the Commission. One relates to the total revenue from all rates which is necessary for the carriers to give adequate service, and the prescription of individual rates on specific movements and commodities. Another concerns the effect of the rates on the movement of traffic. The third has to do with the effect of proposed rates on producer marketing arrangements. In

¹³ Livestock generally moves on commodity rates which are specifically established for the commodity named, and are usually restricted to specific routes. Key point rates consist of specific rates prescribed between important cities. Class rates bear a definite percentage relationship to one another and are based on distance, increasing with distance but at a declining rate. Commodity rates normally take precedence over class rates.

the past, the Commission and carriers have given substantial weight to market competition in adjusting rates on livestock and dressed meats, but have not ignored transportation conditions which may run counter to the direction of market competition. During the post-war period motor carrier competition has become an increasingly important force in the market situation, supplying an alternative mode of transportation in the form of private and contract haulers whose rates are not subject to regulation. Rate adjustments on particular movements have been forced on

the railroads as a result, and the effect has been to upset the relationships established to meet market competition. Future rate and market stability will depend upon the wisdom of the Commission in determining how transportation circumstances and market conditions are to be weighted in rate adjustment matters. Perhaps the most logical place to begin the evaluation would be a close examination of the techniques currently used in increasing rates in the livestock and meat-packing industry.

Census versus Trend: A Comment on the 1954 Manufacturing Data

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and

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THE LONG-AWAITED 1954 Census of Manufactures will prove a disappointment to those who hope to use it as a basis for detailed comparisons with 1939 and 1947 industrial activity. The several Censuses of Manufactures have frequently been used by economists and economic geographers to analyze long-term trends in manufacturing activity and industrial shifts. Each successive Census has generally been taken as a representative sample of the whole general period which it reports. In the past this assumption of broader representation has proved essentially correct. The various Censuses from 1929 through 1947 have, in general, reflected the long-term national trend in industrial activity and have proved reasonably reliable as bases for the detailed mapping of industrial developments and relocations.

In a recent article¹ we employed 1939 and 1947 Census of Manufactures data (in conjunction with 1953 County Business Patterns statistics) in analyzing such industrial trends in Illinois. We had hoped to amend any analytical errors resulting from the use of two different basic sources by reference to

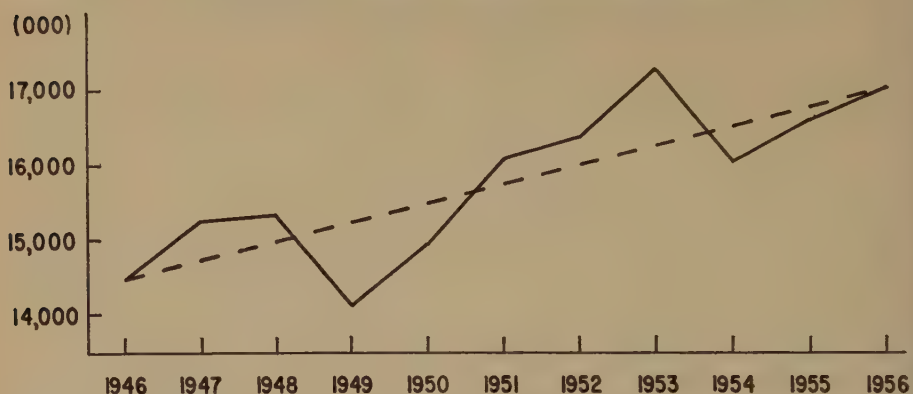
the 1954 data when it became available. It now appears that such emendation will reveal little, since the 1954 Census of Manufactures unfortunately was taken during a sharp recession in employment in manufacturing. Recovery was swift and events soon left the Census far behind.

Since World War II the trend lines for manufacturing in both Illinois and the United States (specifically here for employment in manufacturing) have moved consistently upward (Charts 1 and 2).² However, the 1954 data lie well below the trend lines for both the state and the nation. The 1947-54 trend, for example, implies an employment increase over the period of 6 percent in Illinois, but the actual figures show a *decline* of 1 percent. Again, Chart 1 in the cited article shows 18 counties with positive quotients of comparative change of manufacturing workers above 1.2 between 1939 and 1953 (on a state base of +83 percent); between 1953 and 1954, 12 of these counties suffered sharp declines in manufacturing employment and

¹ "The Changing Industrial Structure of Illinois," *Current Economic Comment*, Vol. 18, No. 4.

² The trend lines shown here are linear least squares. Alternate computations, both linear and parabolic, extending back to 1919 have shown a comparable or steeper inclination.

Chart 1. Employment in Manufacturing in the United States, 1946-56



Sources: U. S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States*, 1951 and 1956; and U. S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review*, March, 1957.

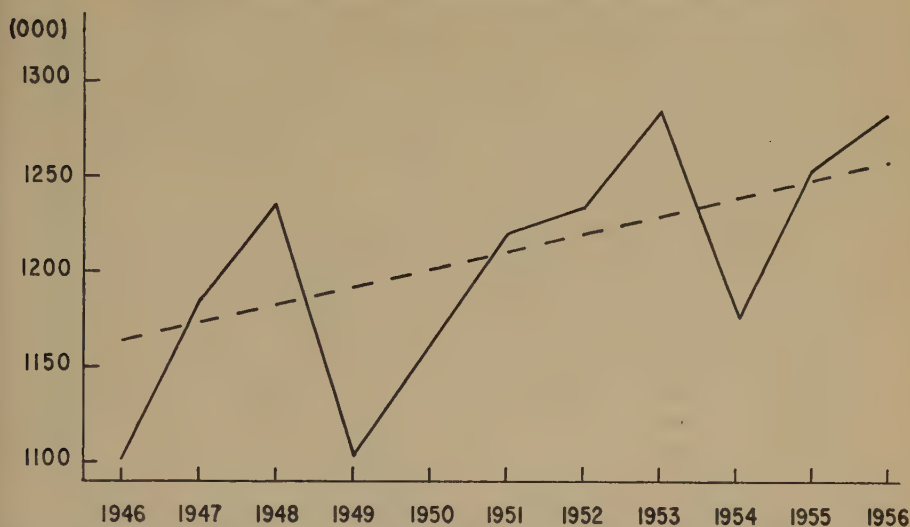
in some cases fell below their 1947 level.

Statistical compilations are, of course, always out of date, but to be used as more than mere historical documents they must as nearly as possible represent the broader period of which they are specific samples. By its very nature any census report is only a cross-section of reality at a given point in time. Rarely is it used in this way alone, however, and its greatest value is realized when it is sufficiently close to the long-term trend to reflect accurately the changes illustrated by the trend. If, then, the census should deviate from the known trend, it preferably should err in the direction of the trend in order to reflect the actual course of events and to anticipate not-yet-documented current and future conditions. A deviation as in 1954, opposite to the trend, gives rise to immediate problems. Comparison between the 1947 and 1954 Censuses implies a marked national slowdown in the rate of ad-

vance in industrial employment. (In some individual states — Illinois, for example — the data indicate a decline in employment.) Thus, if the data are used without reference to the actual trend lines, the 1954 Census suggests a sequence of activity at odds with the actual situation between 1947 and the mid-1950's.

It will be observed from Chart 1 that the computed trend lies slightly below the 1947 actual figure for "all employees in manufacturing." It lies an equal distance above the 1954 situation. These deviations from a rising trend line make comparisons between the two census years unsatisfactory and indicate a need for an alternative recent manufacturing census more nearly representative of the situation to be expected on the basis of the calculated long-run trend. The only currently available census document which appears satisfactory is the 1953 County Business Patterns. To be sure, it deviates more widely from the illustrated long-term

Chart 2. Employment in Manufacturing in Illinois, 1946-56



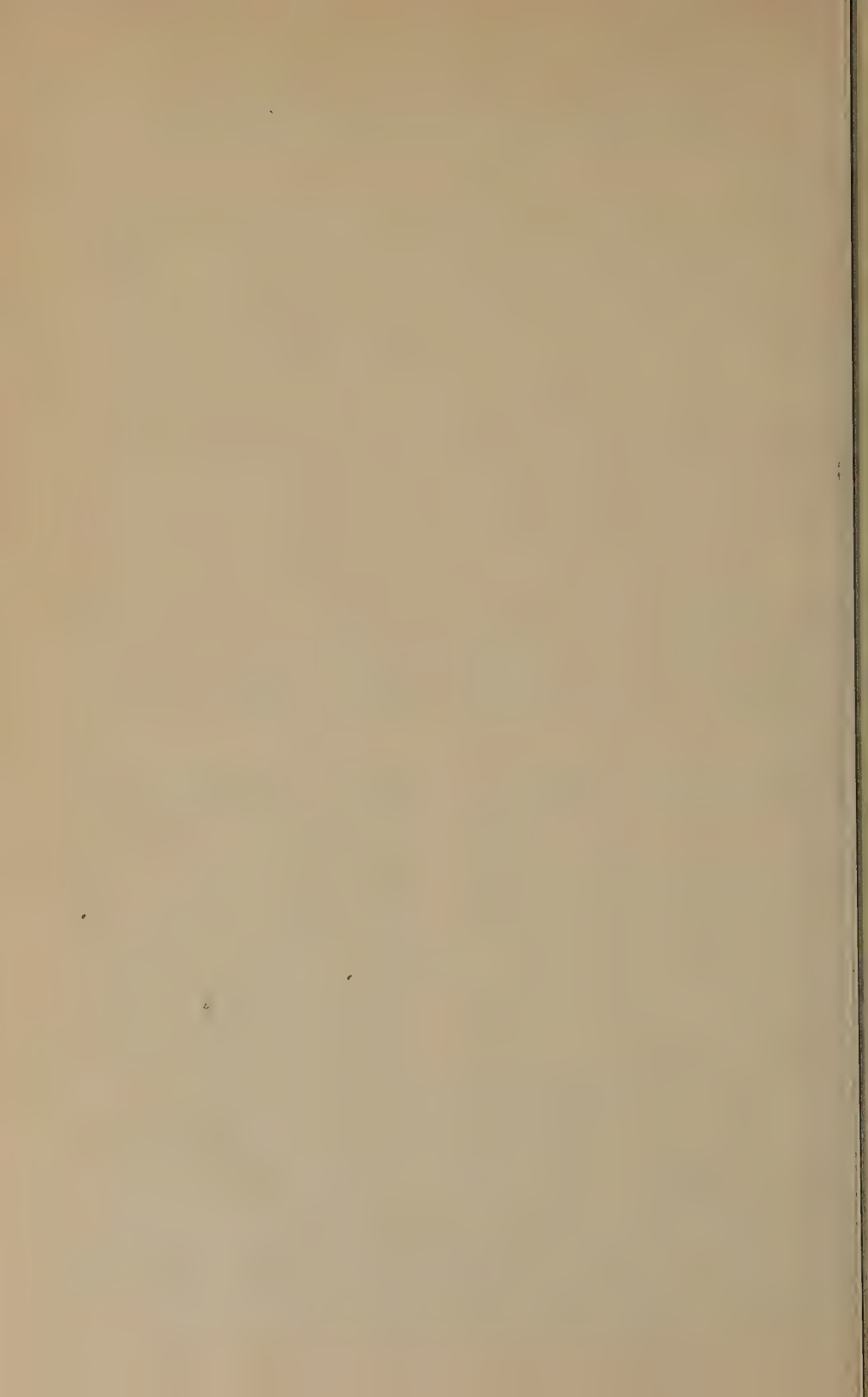
Sources: U. S. Department of Commerce, Office of Domestic Commerce, *Business Establishments, Employment, and Taxable Payrolls Under Old-Age and Survivors Insurance Program, First Quarter, 1946; Illinois*; U. S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States*, 1951 and 1956; U. S. Department of Commerce, Bureau of the Census, *U. S. Census of Manufactures, 1954: Illinois*; and U. S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review*, March, 1957.

trend than does the 1954 Census. Thus the rising Illinois trend (Chart 2) suggests a 5 percent increase in all employees between 1947 and 1953; actual 1947 and 1953 figures³ show a 13.2 percent increase. But the 1953 data have the advantage of a positive rather than a negative variation. Hence, although comparison between the 1953 County Business Patterns and the 1947 Census of Manufactures gives an inflated valuation to net increases in employment and other comparable data, it answers the objection mentioned previously by reflecting a sequence which is verified by currently incomplete 1955 and 1956 data.

Although the 1953 data may shortly be

³ Fellmann and Roepke, *op. cit.*, Chart 3.

superseded by the 1955 County Business Patterns, they may still prove a more accurate guide to the locational situation nationally and regionally in mid-1957. For the 1955 County Business Patterns, like the 1954 Census of Manufactures, will fall below a steadily rising trend line. If the trend line (Chart 1) is extended, the 1957 point lies almost exactly at the 1953 level of manufacturing employment. Obviously data as old as 1953 are not satisfactory bases for forecasting the level of activity in 1957. If, however, employment indexes for 1957 fall on or near the trend line, then the distribution of activity at a similar level of employment in 1953 may be useful in discerning long-run changes in location and distribution.



Books Reviewed

[*Barriers to New Competition: Their Character and Consequences in Manufacturing Industries.* By Joe S. Bain (Cambridge: Harvard University Press, 1956, pp. x, 329. \$5.50)

Students of industrial organization and of antitrust policy have long been interested in the relation of the market structure of industries to their performance record in such matters as prices, profits, and relative efficiency in production. The novelty of the present work, according to the author, consists largely in its extended treatment of "the nature and the effects of one potentially strategic dimension of market structure—the 'condition of entry', or the relative ease or difficulty of entry of new competitors to an industry. In other terms, it seeks to measure the varying force among industries of 'potential' competition, or threatened new entry, and to inquire whether and in what way variations in this force influence the market performance of established firms" (pp. v-vi). The present investigation was undertaken because of a conviction (1) that most analyses of how business competition works have dealt with competition among firms already established in an industry, with little attention to the influence of potential competition from possible new competitors, and (2) that so far as economists have considered the latter factor, they have had no very good idea of how important it actually is. Accordingly, the author describes his task as being to develop a theory con-

cerning the potential importance of the condition of entry as an influence on business performance; to assess, so far as available data permit, the extent and nature of the influence of this factor; and to suggest some implications of the latter findings for public policy toward competition and monopoly.

Bain states that the significance of the condition of entry into an industry is to be evaluated roughly "by the advantages of established sellers in an industry over potential entrant sellers, these advantages being reflected in the extent to which established sellers can persistently raise their prices above a competitive level without attracting new firms to enter the industry" (p. 3). Three basic determinants of the condition of entry are recognized. The first is an "absolute cost advantage," such as control of production techniques through patents, imperfect competition in factor markets which results in lower buying prices for established firms, limitations on the supply of one or more factors, and money-market conditions which impose higher costs upon potential entrants than upon established firms. The second basic determinant is a "product differentiation advantage" of established firms, including control of favored distributive outlets. The third determinant consists of economies enjoyed by large-scale established firms, including both "real" and "pecuniary" economies of large-scale production, distribution, and advertising.

About half of the introductory chapter is devoted to a deductive theoretical

analysis of the effect of conditions of entry upon established firms with respect to such matters as monopolistic restriction of output, productive efficiency, relation of prices to costs, and the size of selling costs. The effect is shown to vary, depending upon the height and nature of the barriers to entry, upon whether the market is atomistic or oligopolistic, and, if oligopolistic, upon the degree of concentration, collusion, and recognized interdependence. This provides a framework for the author's main task, which is a detailed empirical study of the previously mentioned determinants of the condition of entry in 20 manufacturing industries. The data were secured from questionnaires addressed to executives of firms in these industries, supplemented by a review of relevant published and unpublished material. Among the industries studied, the highest barriers to entry were found to be, not surprisingly, in automobiles, cigarettes, quality fountain pens, liquor, tractors, and typewriters. Product differentiation advantages were found to have greater over-all importance as a barrier to entry than scale economies or absolute cost advantages. Among the industries with the highest entry barriers, product differentiation advantages were a strong contributing factor in the case of automobiles and typewriters and the dominant factor in cigarettes, liquor, and quality fountain pens. Product differentiation advantages were found to rest not solely, or even mainly, on advertising but also on consumer dependence upon product reputation, "conspicuous consumption" motives on the part of purchasers, and

ownership or control of dealer-service organizations by manufacturers.

Bain finds that lack of systematic data on the market performance of most of the 20 industries studied precludes definitive conclusions concerning the relationship of such performance to the condition of entry, but he ventures some limited and tentative conclusions based on available data. Industries with very high barriers to entry tend more than others toward high excess profits, monopolistic output restriction, and possibly excessive costs of sales promotion. Where the barriers to entry are lower, competition appears to be more "workable," although in some cases this condition is associated with chronic or recurrent excess capacity. Industry performance is affected by the degree of seller concentration, "But seller concentration alone does not appear to be an adequate criterion of the workability of competition, since high seller concentration seems to be connected with significantly different sorts of performance, depending on the height of the barrier to entry" (p. 204).

On the public policy side Bain concludes that existing legislation "might well be stretched in its application to deal fairly effectively with barriers to entry resulting from some advantages of large-scale promotion, from some product-differentiation advantages of large firms, and from most absolute cost advantages of large firms. But by no means can this be done with certainty, and if at all, perhaps with such crudity that losses might outweigh gains" (pp. 219-20). In particular, present legislation cannot deal adequately with the important product-

differentiation barriers to entry. Hence, supplementary legislation based upon detailed further study will be required.

The new data relating to the nature and significance of barriers to entry and the analysis thereof contained in this study confirm some and modify other commonly held impressions concerning this aspect of market structure. Bain's study may well serve as a model for further studies of the theoretical and public policy problems of industrial organization.

ROBERT W. HARBESON

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The Sterling Area in the Postwar World. By Philip W. Bell (New York: Oxford University Press, 1956, pp. xxvi, 478. \$10.10)

This book, bearing the subtitle "Internal Mechanism and Cohesion, 1946-52," is a study of the financial institutions and policies of the Sterling Area in the years following the second World War. The tremendous mass of data, both qualitative and quantitative, which forms the base of the study has been brought in some cases down to 1955. In its original form, the work served as the author's doctoral dissertation at Princeton University, and in the scope of its empiricism, it is an excellent contribution in the lineage of Taussig and Viner. For those who require a ready reference to the legal framework and monetary practices of the Overseas Sterling Area, Professor Bell's work will provide the most comprehensive description available.

Yet the very profusion of facts and subordinate investigations which make the book a useful reference (a utility

enhanced by the inclusion of a good index and bibliography) will reduce its interest for the general reader. For the theme, if there may be said to be one, scarcely emerges before the final chapter. The conclusions which appear there fit the empirical analysis of the preceding chapters reasonably well, although the reviewer ventures the suggestion that a more elegant presentation might have resulted had the central theme been developed earlier in the book and the evidence trimmed to a neater fit.

Bell rejects "convenience," "complementarity," and "inertia" as still-useful keys to understanding Sterling Area relationships. "The present structure," he says, "is built upon bargaining power, and the future course of the Area will depend primarily upon shifts in bargaining strength . . ." (p. 399). The willingness of any member region to continue its participation in the system, rather than, for example, adopting transferable account status, depends upon considerations of trade, capital accommodation, the value of London as a clearing center (since transferable account status, although currently almost equivalent to Area membership for clearing purposes, does not have an assurance of continuity), and politics. Bell examines each of these in turn. With respect to trade, he emphasizes that the positions of individual countries differ, but "In general the long-run profitability of trading ties with the United Kingdom is declining for OSA members, and with it the British bargaining position . . ." (p. 405). Commercial policy considerations, nonetheless, such as imperial preferences, the

alleged stability of the British market, and the willingness of the UK to consider bulk-purchase contracts, are said to be an attraction of the Area. With respect to capital, Bell doubts the ability of the United Kingdom to provide large amounts out of its own saving, and any whetting of the appetite of overseas members for dollar loans "is likely to impose new strains" on the Area. His description of the decline in importance of London as the Area financial center is the most interesting part of the book. He finds substantial evidence of a growing role of OSA central banks, decreases in the need for sterling balances, development of overseas regional finance centers (especially in India), and a decline in the use of sterling bills of exchange as a trade instrument. Furthermore, he notes that the advantages to OSA regions of making short-term loans to Britain without gaining a completely liquid asset thereby and of participating in an adjustment mechanism in which the burden of adaptation is typically heavier at the periphery than at the center have come into question. The discussion of politics enters only in the concluding chapter. Here Bell expresses doubt that Commonwealth ties could outweigh any serious economic grounds a member might develop for leaving or modifying the Area.

The conclusion, then, is that "continuation of the existing system as it now operates over any extended period in the future if not impossible is at least unlikely" (pp. 420-21). Similarly, a return through convertibility to the system as it existed in the 1930's is impossible. The "most likely alterna-

tive" involves modifications of the system which may include "partial" or "limited" convertibility, a permanent Area-wide policy-making organization, more flexible credit controls in the OSA regions, and perhaps more flexibility of intra-Area exchange rates.

Particular aspects of Bell's argument seem to be overdrawn. For example, he declares the UK to be strongly dependent on OSA primary products because alternative sources of supply require dollars. The contrary view may be taken, however, that if OSA primary products should indeed be directed to Germany, Japan, the United States, or elsewhere, the UK dollar problem might in considerable degree be mitigated. Also, his assertion that OSA countries tend to remain within the Area because their leaders believe the UK would negotiate bulk-purchase primary-products contracts with Area members in a declining market seems to attribute an unrealistic naïveté to OSA politicians. But the tenor of his position is nevertheless realistic. The contribution of the book lies, not in the thesis that human institutions change, and irreversibly, but in its documentation of some changes which have occurred, including some which probably few had recognized.

J. CARTER MURPHY

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Financing Unemployment Compensation: Ohio's Experience. By Edison L. Bowers, Paul G. Craig, and William Papier (Columbus: Ohio State University, Bureau of Business Research, 1956, pp. xix, 314. \$4.00)

The increasing size of many states' reserve funds against a background of low unemployment has caused discussion as to whether taxes should be lowered, benefits liberalized, the reserve fund reduced, or some combination of these courses of action taken. The Ohio financing study attempts to answer these and many other questions. How large should Ohio's reserve fund be? How far in advance should a financing program be planned? Should tax policy attempt to achieve a stable tax rate over a planning period, attempt to pay each year's costs out of that year's taxes, or seek to promote countercyclical tax variations?

More specifically, the Ohio study attempts to achieve the following five objectives:

1. Estimate the average annual cost of paying unemployment compensation for the decade 1953-62 under four carefully considered alternative assumptions as to levels of covered unemployment during the decade.

2. Determine the effects upon these alternative cost estimates of possible changes in the benefit provisions of the law.

3. Formulate a reserve policy which clearly states the role of reserves in the financing of unemployment compensation.

4. Formulate principles of financing which include policy on reserves and contribution rates.

5. Evaluate the amount of the reserve fund and the tax structure in light of the policies formulated and the estimated cost of benefits.

A review of the legislative and financial history of the Ohio unemployment compensation system is presented. Each legislature since December 16, 1936 (the date the Ohio Unemployment Compensation Law, House Bill No. 608, was passed in special session), has

made some changes in the law. Ohio is shown to have the lowest ratio of benefits to revenue of any leading industrial state. Also, Ohio reserves are probably the most adequate of any industrial state when relative potential burden and past financial experience are used as measures. The study analyzes possible changes in economic conditions in the nation and Ohio and in Ohio's financial position.

The authors emphasize that the cost estimates derived are not to be construed as predictions. The findings, rather than *predictions* of future costs, are *estimates* of what the *reasonable range of costs might be* in the future. The legislative and economic conditions for which cost estimates are made are assumptions, and are presented in detail in Chapters 4 and 7. Chapter 6 gives a detailed account of the Ohio economy, including its composition and growth trends.

Chapter 5 shows the effect of wage guarantees upon unemployment compensation. Since there has been a growing interest in guaranteed annual wages, the authors felt that both the legislative effects and the economic effects should be examined. They concluded that the net effect of GAW probably would be that the total cost of unemployment compensation would rise but by less than the percentage of liberalization of benefit provisions, because of the probable stabilization resulting from the two programs combined.

The last three chapters of the study seem to be the most significant because here the authors get away from retrospect and delve into the findings, which

for the reader's benefit have been summarized in tabular form in the first chapter. The methodology of cost estimates and an analysis of significant variables in determining the volume of compensable unemployment is covered thoroughly in Chapter 8. The pattern laid down by W. S. Woytinsky in a similar study for the Bureau of Employment Security in 1948 has been used extensively.

The cost of unemployment compensation is discussed in Chapter 9. Estimates were computed which showed the volume of compensable unemployment and its rate of compensation under the various legislative and economic alternatives of the study. It was found that the range of costs under any one cycle pattern was not very wide for the different legislative assumptions. The highest cost rate was only about 13 percent greater than the lowest cost rate under any of the patterns. Under favorable economic conditions with little unemployment, raising benefit amounts to \$35 would be the most costly change. But under severe unemployment, such as that of the 1930's, increasing the maximum duration of benefits to 31 weeks would be the most costly change.

The last chapter attempts to answer the question of how to finance the benefits discussed in the preceding chapters. The definition of sound financing used in this study is as follows: "A system of financing unemployment compensation is financially sound, if, over the cycle, it maintains continuity of the program without curtailment of benefits, maintains solvency without borrowing, and balances costs and revenue

without varying the over-all tax rate." Both the pay-as-you-go plan and borrowing are discussed in detail. The role of reserves and the development of a tax policy are investigated.

As of December, 1952, the unemployment compensation reserve fund of Ohio amounted to \$624 million. This was equal to 9.5 percent of the taxable payroll for that year. It amounted to about \$250 of reserve for each covered worker in Ohio and would cover from 4.2 to 11.3 years of average costs of the various cycle patterns used in this study. Four cycle patterns were established: most favorable conditions probable, intermediate favorable conditions, intermediate unfavorable conditions, and least favorable conditions probable. Having assumed a cycle pattern, the needed reserve is estimated in terms of the principles of sound financing. This is then compared with the existing reserve and a decision to add to or deplete reserves is made.

This financing study conducted by the State of Ohio was needed to determine what contribution rate will provide adequate funds over a period of years without creating excessive reserves. Although it contributes to the already growing fund of information of this type, its greatest contribution is to the State of Ohio in helping it determine long-run reserves and tax policy. Only through such a study can individual states gain this much-needed information, because of the variance in state unemployment compensation laws and state economic patterns.

CLINTON SPIVEY

University of Illinois

Location and Space-Economy. By Walter Isard (New York: John Wiley and Sons, 1956, pp. xix, 350. \$8.75)

The object of this work is to develop "a more adequate general theory of location and the space-economy." This is a large order; whether you think Dr. Isard has made good delivery depends on what you mean by "adequate."

To Dr. Isard, adequacy does not mean relevance. "Admittedly the general theory of location and space-economy evolved in this volume is of little direct utility for handling specific problems of reality." By contrast to the physicists' methods, the theory here stated has no explicit relation to empirical regularities of the space-economy summarized in an early chapter. Isard is no Newton demonstrating "the frame of the system of the world." Indeed, the analysis begins with an apology to Brahe and Kepler for not adopting their method of accumulating extensive observations and condensing the voluminous data into concise empirical rules before formulating a general theory.

Isard starts not from well-established empirical rules, then, but from the familiar assumptions of traditional price theory. His approach is eclectic, building on and resolving differences between other writers. He uses his considerable architectonic skills to build a more stately mansion along well-tried classical lines. Not only this, but he details the pedigree of the building; in 350 pages there are 414 footnotes and the authors' index lists 144 names.

The heart of his analysis is the addition in Chapter 10 of variables expres-

sing location factors to the familiar (though not necessarily widely understood) mathematical statement of general equilibrium conditions. The introduction of a *transport input* (defined as the movement of a unit of weight over a unit of distance) and the *transformation function* (or the technical substitution relations between any pair of inputs, any input and output, or any pair of outputs) is the key to a general equilibrium statement which explicitly includes location factors.

Earlier chapters state the location problem as Isard sees it and review (in abbreviated treatment) the work of earlier theorists of location such as Weber, Predöhl, Weigmann, Palander, Lösch, and Ohlin. After a description of empirical regularities in the space-economy like the rank-size rule in Chapter 3, the analysis begins with a discussion of transport inputs and related concepts. The theory covers location equilibrium of the firm, market and supply area analysis, agglomeration and agricultural location, interrelations of location and trade theory, the mathematical formulation of general equilibrium conditions for the space-economy, and a partial graphical synthesis and summary.

The theory derives the basic principle that "the marginal rate of substitution between any two transport inputs or group of transport inputs, however the transport inputs or groups of transport inputs may be defined, must equal the reciprocal of the ratios of their transport rates, social surplus (however defined) less transport costs on all other transport inputs being held constant." The claim is that this prin-

ciple is "a basic core of a general location theory from which, for the most part, existing location theories are derived as special cases. . . ."

This book, certainly a landmark in its field, will have direct and compelling interest to economic theorists with viewpoints like Isard's. Graduate students in location economics courses will probably be required to master it. Others — sociologists, city planners, traffic engineers, geographers, demographers — may find its empirical review a valuable reference but will probably neglect the theory with impunity. Full of erudition, the book deserves considerable praise; yet considering its ambitious scope, one is haunted at times in reading it by the proposition that impeccable logic may sometimes be scientifically barren, that is, unproductive of further knowledge.

Dr. Isard promises us another volume, on principles of regional science, in which he turns to tools such as activity analysis, interregional input-output analysis, and gravity and other types of models to throw light on the "aggregate demand and income side of the picture." One hopes he will be less eclectic and use his arsenal of weapons more boldly in that volume. One wishes he would aim more directly and simply at explaining the actual arrangement and movement of people and things in the economy.

CARL H. MADDEN

New York City

Office Work and Automation. By Howard S. Levin (New York: John Wiley and Sons, 1956, pp. xvi, 203. \$4.50)

Because of the growing importance of administrative activities in our complex methods of production, management's requirements for timely information are receiving increasing attention. Having attained a high degree of automaticity in the fabricating, handling, and finishing functions, engineers now seek to improve the productivity of services such as office work that do not directly increase the value of output but add substantially to its cost. Their success in devising new means for coping with the burden of paper work is one of the most impressive developments in the progress of automation.

Mr. Levin has written an authoritative and readable nontechnical introduction to certain important innovations in the technology of office work. The author is now employed as a management consultant and is a former member of the University of Illinois mathematics faculty.

The book is addressed to business executives, accountants, and methods research specialists who may have little knowledge of the most recent developments. Social scientists, also, will find valuable background material for understanding some of the forces shaping clerical labor trends.

Mr. Levin equates the term "office work" with the broad area of "information handling" — an activity found in the plant as well as in the central office. This is further broken down into three functions: collecting and recording, processing, and utilizing information relating to the conduct of a business.

By "automation" Mr. Levin means three new tools of office management:

integrated data processing, electronic computers, and operations research. The first refers to the use of tapes and "common language" devices that make it possible to process office documents, from one machine to the next, with a minimum of manual recopying from the initial handling. Electronic computers, the best publicized development, represent a new class of information processing machines. Operations research, a broad term which is difficult to define exactly, covers the use of mathematical and scientific techniques to analyze information about the activities of a plant. Three-fourths of the book is devoted to explaining these three developments.

A distinctive feature of Mr. Levin's explanations is his emphasis on the general principles underlying these new tools and their applications. He describes, for example, the typical use of computers in inventory accounting and purchasing, and customer billing; the arguments for renting and purchasing; and the costs of programming. He does not discuss the specifications of particular models or details of particular examples of their use. The procedures that various companies have used in introducing automation into an office are also outside the scope of the book.

In appraising the future progress of these tools, Mr. Levin takes a realistic, nonrevolutionary view. Because of their complexity he believes that considerable talent, time, and funds will be required to achieve the full benefits.

Looking at the subject from a management point of view, Mr. Levin concludes that improvements in information handling will lead to more

efficient control of operations, to more realistic business policy decisions, and to the training of accountants "who can be more than archeologists and morticians." The controllership concept may develop in future organization charts into a department of information handling, with a Vice-President-Information as a key member of top management.

As far as the implications for clerical workers are concerned, Mr. Levin sees displacement of many clerical data processors who would not generally be qualified for the new jobs of programmers, systems analysts, and design and maintenance engineers. However, in view of the experience of some of the large insurance companies and others that have introduced electronic data processing, the personnel problem seems to be one of transfer and retraining of supervisors and workers and of vocational guidance of young high school graduates, rather than of large-scale layoffs. More study of the implications for jobs and skills rather than either dire predictions or complacency seems to be needed at this point.

Mr. Levin could enhance the usefulness of this introductory guide by providing, in future editions, an annotated bibliography for those readers who are likely to be stimulated to seek more detailed information about office automation.

EDGAR WEINBERG

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Private Foreign Investment: Legal and Economic Realities. By Seymour J. Rubin (Baltimore: Johns Hopkins Press, 1956, pp. x, 108. \$3.50)

The chapters in this book were first presented as lectures in Washington, D. C., under the auspices of the School of Advanced International Studies of the Johns Hopkins University. The author is primarily concerned with examining some of the theoretical legal principles and practical problems connected with the protection of private foreign investment. The relevance of long-established legal doctrines to current circumstances is appraised.

Legal principles reflect national policies. The policy adhered to by an investing nation may postulate that private property cannot be expropriated without payment of compensation and except for public use. An underdeveloped borrowing nation, however, may offer reasonable assurances to private foreign investment, not just as a concession to foreign investors, but primarily as a prerequisite for obtaining investment necessary to economic growth. If creditor and debtor nations alike presume that there is something to be gained from protecting private investment, policies can be derived which apply principles inherent in a private enterprise system to relationships between nations.

To define expropriation merely as the taking of private property for public use by a sovereign state may not be sufficiently comprehensive. Extensive regulations on the use of private property, state-imposed foreign exchange controls, and government monopolies are so prevalent in the world today as to obliterate any obvious demarcation between the private and the public with respect to foreign-held properties. To distinguish between the taking of

private property, which according to United States law usually involves exercise of the power of eminent domain, and a non-taking involving legitimate exercise of the police and regulatory power is sometimes difficult. It is not clear at what point the power of the state to organize its own economy so impinges upon private property rights that the foreign owner of those rights must be compensated.

The total actions of a state may negate the accepted prerogatives of private ownership even though no open expropriation has been promulgated. The practical result of certain governmental regulations may be that the private investor surrenders his property to the government, either at what would seem to be a forced liquidation price or without any compensation at all. Nevertheless, whether compensation is due if the host government avoids an explicit taking is indeterminate.

Besides its interpretation of international law, the United States has used the negotiated commitment to attain some degree of security for the investor abroad. Assurance that expropriation will be followed by prompt and adequate compensation has been sought in both bilateral and multilateral negotiations.

The conclusion is reached that the treaty method can probably achieve only limited results. If there is already an atmosphere favorable to foreign investment in a country, a satisfactory treaty can be concluded. But in this instance, investment would have been forthcoming even in the absence of the formal agreement. If, on the other

hand, the atmosphere in a country is unfavorable to foreign investment, commitments on crucial issues tend to be vague or are avoided altogether. There is little likelihood that the mere existence of a formal agreement can eliminate the reluctance of the prospective investor under such circumstances.

This does not mean, however, that investment treaties are without significance. Recourse to international common law supplemented by specific treaty provisions can help to achieve some stability in international relationships. An area of existing agreement can be recorded, or the direction of further agreement suggested. Still, agreement is possible only in general terms, and if the statements are sharply defined, or if qualifying reservations are deleted, agreement disappears. Furthermore, it is futile to read firm commitment into statements phrased to allow for some latitude in interpretation.

Since the close of World War II much has been written about private foreign investments. The flow of such investments declined after the economic crisis of 1929. Revival in the ensuing years has been slow. Public investment has increased manifold during this same period to compensate in part for the paucity of private capital movements. Numerous discussions have centered upon ways and means of stimulating private foreign investment.

The present study is very specialized. Attention is concentrated upon the legal issues involved in protecting private property abroad. Illustrative cases

are cited frequently as the author strives to relate international law to the contemporary political and economic environment. The connection between governmental policy and the status of the private investor is emphasized throughout.

The modern world has reduced the efficacy of traditional measures to protect private property abroad. Devices applicable to nineteenth-century circumstances have become anachronistic in today's changing economic conditions. Realism would seem to require the development of new techniques, consistent with democratic processes, for protecting private foreign investment. The formulation of a sound policy for cooperation between government and business in foreign affairs is considered a major necessity. But methods for increased cooperation cannot be expected to evolve quickly, and compromise is inevitable.

The author's analysis is cogent and his style of writing precise. This timely little book is a thought-provoking addition to the literature on foreign investments. It should be of particular interest to the economist and the political scientist as well as to those in the legal profession.

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Trends in Employment in the Service Industries. By George J. Stigler (Princeton: Princeton University Press, 1956, pp. xviii, 167. \$3.75)

In this National Bureau of Economic Research study, Professor Stigler makes an intensive statistical analysis of long-

run employment trends in service industries in the United States and attempts to uncover some of the underlying causal factors. Included in the analysis are trade, finance and real estate, professional services, domestic and personal service, and government. (Transportation and other public utilities are excluded because they have been treated in earlier National Bureau studies.) The author finds that total employment in these industries expanded continuously relative to the labor force between 1870 and 1950, the proportion more than doubling during the period. Moreover, only one major category of the service industries — domestic service — declined in importance (from almost 15 percent of the labor force in 1870 to less than 4 percent in 1950). All the others experienced substantially unbroken relative growth, although there was a minor and temporary interruption in the case of education during the 1930's. However, rates of growth varied considerably among the major categories, to say nothing of the even greater diversity of pattern among specific industries.

These differences in trends, and also the differences in basic characteristics (size of firm and so on) of the various service industries, lead the author to conclude that growth in the service industries is neither universal nor inevitable, and that causal factors underlying employment trends must be sought by examination of individual industries rather than of all of them combined. Accordingly, selected segments of retail trade, routine personal service, professional service, and busi-

ness service are analyzed in some detail.

On the basis of this analysis, the author concludes that technological change, increased specialization, changing population characteristics, and labor supply factors have been the major influences on the development of the service industries. Limited evidence suggests that changing patterns of income distribution may also be influential, but further investigation of this variable is recommended.

Technological change in the service industries may take the form of increased knowledge or skill of workers, as has been the case in medical service, or of changes in the organization of industry, which have been especially pronounced in retail trade. "Mechanization" has also been influential in some industries. For example, the development of the safety razor is the major explanation of the long-run decline in the relative number of barbers; and the widespread introduction of household appliances has played at least some part in the declining importance of domestic service.

Increased specialization has been most significant in explaining the rise of business services, but some of the personal service industries have also benefited as the family has relied more and more on business enterprises for some of the functions it once performed almost exclusively.

Among population characteristics, greatest importance is attached to urbanization, which has been a major factor in the expansion of trade and such routine service industries as laundries. The age structure of the popula-

tion is also an important variable, particularly in affecting the demand for educational and medical services.

Concerning labor supply factors, Stigler observes that the simultaneous increase in professional services and professional standards has been possible only because of the unprecedented scale of higher education in the United States and suggests that this trend is likely to continue since earnings differentials in the professions are still sufficient to attract increasing numbers of personnel. On the other hand, the extension of education and the sharp drop in the rate of immigration are likely to reduce the supply of workers for the routine personal service industries.

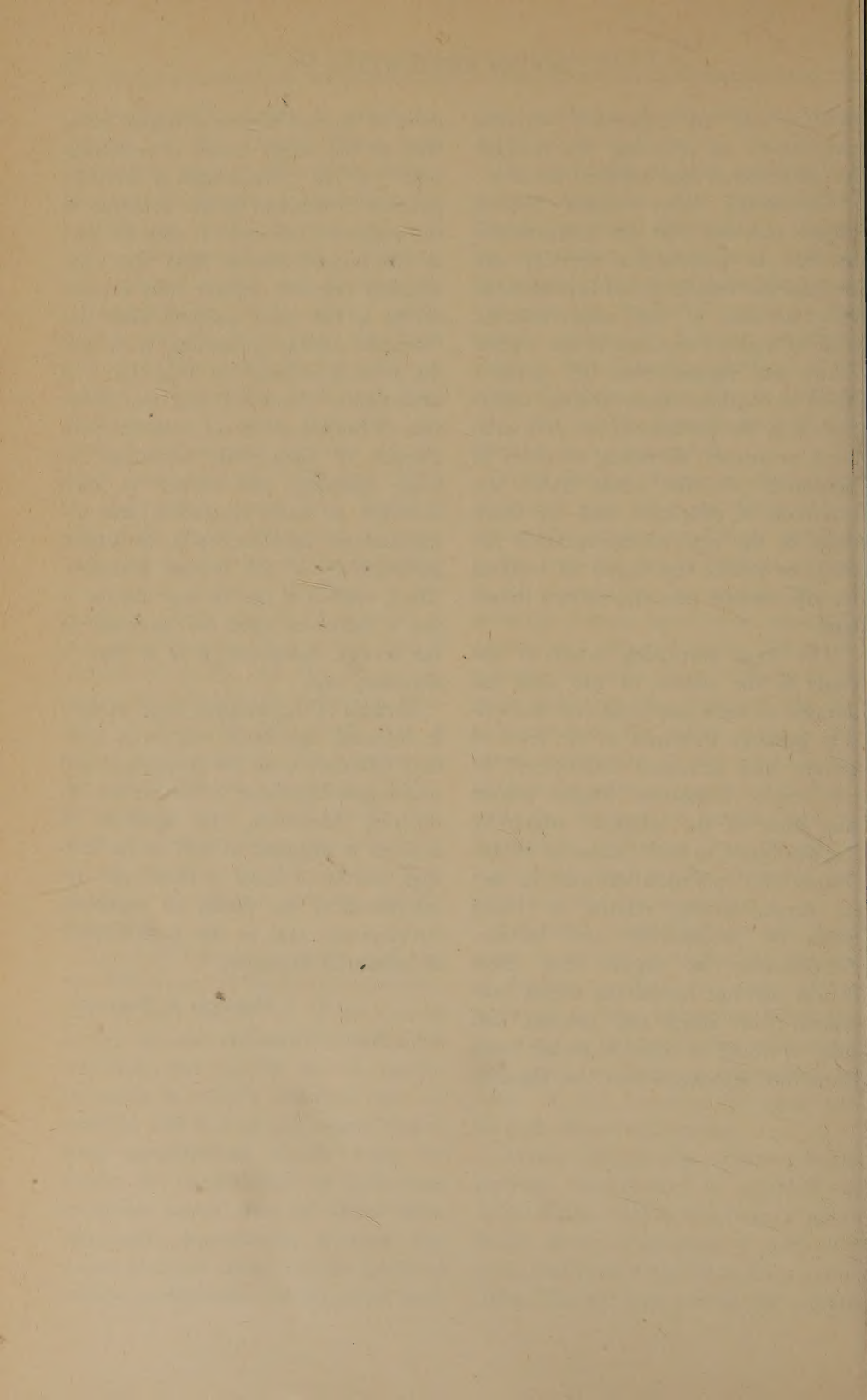
The most surprising result of the study is the failure of the data examined to show any clear-cut relationship between increases in the level of income and increased employment in the service industries. Stigler admits that some of the influence which he has attributed to such factors as urbanization and specialization may in fact be fundamentally related to rising levels of productivity and income. Nevertheless, he argues that these factors are not necessarily highly correlated with rising real income, and that "it would be timid to shrink away from the hypothesis that the absolute

level of income is only a minor influence on the longer trends of consumption" (p. 161). Even such a carefully guarded conclusion seems doubtful to this reviewer, however. It may be true, as the author asserts, that "the relationship between income and urbanization is far from unique" and that "societies display [versatility] in spending a rising income" (p. 161), but it is nevertheless elemental that the diversion of human resources from the production of such basic necessities as food, clothing, and shelter to such activities as trade, education, and entertainment depends upon increasing productivity in the former activities. Thus, even if a rise in real income is not a sufficient cause of increases in the service industries, it is at least a necessary one.

Because of the amazing array of data it contains, this book will be a valuable reference work for economists and sociologists interested in the service industries. Moreover, the methods of analysis it suggests, as well as its findings, will be of value to those who are interested in the theory of economic development and in the determinants of industrial structure.

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Books Received

- Abramovitz, Moses, and Eliasberg, Vera F. *The Growth of Public Employment in Great Britain*. (Princeton: Princeton University Press for the National Bureau of Economic Research, 1957. Pp. xiii, 151. \$3.75)
- Alexandersson, Gunnar. *The Industrial Structure of American Cities: A Geographic Study of Urban Economy in the United States*. (Lincoln: University of Nebraska Press, 1956. Pp. 134. \$6.50)
- Beaton, Kendall. *Enterprise in Oil: A History of Shell in the United States*. (New York: Appleton-Century-Crofts, 1957. Pp. xiii, 815. \$7.50)
- Board of Governors of the Federal Reserve System. *Consumer Installment Credit*. (Washington: U. S. Government Printing Office, 1957). Part I: *Growth and Import* (Vol. 1, \$1.25; Vol. 2, \$1.00). Part II: *Conference on Regulation* (Vol. 1, \$1.75; Vol. 2, 60 cents). Part III: *Views on Regulation* (\$1.00).
- Bowers, Edison L., Craig, Paul G., and Papier, William. *Financing Unemployment Compensation: Ohio's Experience*. (Columbus: Ohio State University, Bureau of Business Research, 1956. Pp. xix, 314. \$4.00)
- Davis, Keith. *Human Relations in Business*. (New York: McGraw-Hill, 1957. Pp. xiv, 557. \$6.50)
- Horton, Donald C. *Patterns of Farm Financial Structure: A Cross-Section View of Economic and Physical Determinants*. (Princeton: Princeton University Press for the National Bureau of Economic Research, 1957. Pp. xx, 185. \$4.50)
- Ladd, Dwight R. *Cost Data for the Management of Railroad Passenger Service*. (Boston: Harvard University, Graduate School of Business Administration, Division of Research, 1957. Pp. xvi, 345. \$4.50)
- Maisel, Sherman J. *Fluctuations, Growth, and Forecasting: The Principles of Dynamic Business Economics*. (New York: John Wiley and Sons, 1957. Pp. xv, 552. \$7.50)
- Meade, James E. *Negotiations for Benelux: An Annotated Chronicle, 1943-1956*. Princeton Studies in International Finance, No. 6. (Princeton: Princeton University, Department of Economics and Sociology, International Finance Section, 1957. Pp. 89. 25 cents)
- Mulcahy, Richard E., ed. *Readings in Economics from FORTUNE*. Rev. ed. (New York: Henry Holt and Company, 1957. Pp. vi, 154. \$1.95)
- Neumark, S. Daniel. *The South African Frontier: Economic Influences, 1652-1836*. (Stanford: Stanford University Press, 1957. Pp. xiii, 196. \$5.00)
- Rosenbluth, Gideon. *Concentration in Canadian Manufacturing Industries*. (Princeton: Princeton University Press for the National Bureau of Economic Research, 1957. Pp. xv, 152. \$3.50)
- United Nations, Department of Economic and Social Affairs. *Yearbook of International Trade Statistics*,

1955. (New York: Columbia University Press, 1956. Pp. 720. \$7.00)
- Weiler, E. T., and Martin, W. H. *The American Economic System*. (New York: Macmillan, 1957. Pp. xxv, 623. \$6.00)
- Winnick, Louis. *American Housing and Its Use: The Demand for Shelter Space*. (New York: John Wiley and Sons, 1957. Pp. xiv, 143. \$5.50)
- Yang, Shu-Chin. *A Multiple Exchange Rate System: An Appraisal of Thailand's Experience, 1946-1955*. (Madison: University of Wisconsin Press, 1957. Pp. xviii, 200. \$3.00)
- Background for Action*. First Report of the St. Louis Metropolitan Survey. (St. Louis: Metropolitan St. Louis Survey, 1957. Pp. 85. \$1.00)
- The Measurement and Behavior of Unemployment*. A Conference of the Universities-National Bureau Committee for Economic Research. (Princeton: Princeton University Press for the National Bureau of Economic Research, 1957. Pp. x, 605. \$7.50)
- Problems in the International Comparison of Economic Accounts: Studies in Income and Wealth, Vol. 20*, by the Conference on Research in Income and Wealth. (Princeton: Princeton University Press for the National Bureau of Economic Research, 1957. Pp. x, 404. \$8.00)